COLORADO DISCHARGE PERMIT SYSTEM (CDPS) FACT SHEET TO PERMIT NUMBER COR080000 GENERAL PERMIT FOR DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) THAT DISCHARGE TO THE CHERRY CREEK RESERVIOR DRAINAGE BASIN

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A. ACRONYMS

BMP	Best management practice
BPT	Best practicable control technology currently available
CDPS	Colorado Discharge Permit System
CWA	Clean Water Act
DCIAs	Directly connected impervious areas
EPA	United States Environmental Protection Agency
FWPCA	Federal Water Pollution Control Act
ICIS	Integrated compliance information system
LA	Load allocation
MEP	Maximum extent practicable
MFRCP	Municipal facility runoff control plan
MS4	Municipal separate storm sewer system
NPDES	National Pollutant Discharge Elimination System
PDD	Program description document
PGP	Pesticide general permit
SOP	Standard operating procedure
TMDL	Total maximum daily load
WLA	Wasteload allocation

B. FACT SHEET DESCRIPTION

This fact sheet will use the term "previous permit" when referring to the permit in effect from March 10, 2008 to present and "renewal permit" or "permit" will refer to the permit that is replacing the previous permit when issued. The division conducted an extensive stakeholder process that started in November 2012 with a series of meetings to obtain input from permittees and a Pre-Public Notice Meeting on May 6, 2013. In addition, stakeholders were encouraged to submit written input on the issues discussed during the stakeholders meeting or other areas of the permit. The purpose of this stakeholder process was to increase awareness of the renewal process for the general permit, discuss the major areas of review, and obtain input for the development of the first draft of the renewal permit. The first draft of the renewal permit was public noticed on November 1, 2013 and comments were received until January 10, 2014. The division considered more than 1,400 comments received during the first draft permit 71-day public notice period and updated the second draft of the renewal permit accordingly.

The division announced on December 20, 2013 that a second draft of the renewal permit would be developed. The second draft of the renewal permit was public noticed on April 1, 2015 and comments were accepted until June 30, 2015. Appendix A: The Public Notice Comments document summarizes the written comments received on the second draft and the division's response to the comments. The Public Notice Comments also describes why the division did not incorporate a comment.

This fact sheet's primary purpose is to provide the rationale for permit terms and conditions and its secondary purpose is to provide permittees with information from helpful documents.

This fact sheet addresses the following statutory and regulatory requirements:

- A "fact sheet" as required by the federal Discharge Permit Regulations 40 C.F.R. §124.8 and 124.56 to "briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit" and to describe the reasons for permit terms and conditions
- A permit "rationale" as required by Colorado Discharge Permit System Regulations, 5 C.C.R. 1002-61 §61.5(2)
- A "preliminary analysis" as required by Colorado Water Quality Control Act, C.R.S. § 25-8-502(3)(b)
- A "statement of basis and purpose" as required by the federal Clean Water Act, 40 C.F.R. 124.7, to "describe the derivation of permit conditions and the reasons." A "statement of basis and purpose" as required by SB 13-073 and incorporated into Colorado Water Quality Control Act, C.R.S. § 25-8-503.5, "explaining the need for the proposed requirements" and to "present evidence supporting the need for the proposed requirements, including information regarding pollutant potential and available controls, incidents of environmental damage, and permit violations"

C. TYPE OF PERMIT

Master General, NPDES, Municipal Separate Storm Sewer Systems, Second Renewal, statewide. Stormwater Component.

SIC Code: 9511-Air, Water, and Solid Waste Management.
Note: several SIC codes apply to specific municipal activities (sewerage systems 4952, water supply 4941, automotive repair shops 7539, and transportation services 4789). Since there is not a clear SIC code for a Municipal Separate Storm Sewer System (MS4), the 9511 code is applied.

This renewal permit is for the master general discharge permit listed below.

Stormwater Discharge Permit Name	Effective Date	Expiration Date
Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (COR080000)	February 8, 2008	March 9, 2013

D. MS4 PERMITTEES COVERED UNDER THIS PERMIT

As of the effective date of this permit, the cities and towns covered under this permit include City of Castle Pines, Town of Castle Rock, City of Greenwood Village, City of Lone Tree, Town of Parker and Southeast Metro Stormwater Authority.

The counties include Arapahoe County and Douglas County.

E. BACKGROUND

This section summarizes factors explaining the need for the proposed requirements and presents evidence supporting the need for the proposed requirements, including information regarding pollutant potential and available controls, incidents of environmental damage, and permit violations.

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground. Stormwater can pick up debris, trash, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, or wetland. Anything that enters a storm sewer system is discharged untreated into the waterways used for swimming, fishing, and providing drinking water. Storm sewer systems are designed to drain excess stormwater or snow melt from streets, parking lots, and sidewalks. Storm sewer systems are made up of storm drains, usually cuts in curbs, which flow through underground pipes, and then to a local waterway. Storm sewer systems in Colorado do not flow to sewage treatment plants.

The Nationwide Urban Runoff Program was conducted by U.S. Environmental Protection Agency (EPA) and the report was published in 1983. The report concluded the following:

- *Heavy metals (especially copper, lead, and zinc) are by far the most prevalent priority pollutant constituents found in urban runoff. End-of-pipe concentrations exceed EPA ambient water quality criteria and drinking water standards in many instances. Some of the metals are present often enough and in high enough concentrations to be potential threats to beneficial uses.*
- *Coliform bacteria are present at high levels in urban runoff and can be expected to exceed EPA water quality criteria during and immediately after storm events in many surface waters, even those providing high degrees of dilution.*
- *Total suspended solids concentrations in urban runoff are fairly high in comparison with treatment plant discharge. Urban runoff control is strongly indicated where water quality problems associated with total suspended solids, including build-up of contaminated sediment, exist.*

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people, such as the following:

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment can also destroy aquatic habitats.

- Excess nutrients can cause algal blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms cannot exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making swimming area closures necessary.
- Debris and trash—plastic bags, six-pack rings, bottles, cigarette butts, etc.—washed into water bodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish or polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can effect human health and increase drinking water treatment costs.

In addition, non-stormwater discharges can occur from MS4s and also cause impacts on plants, fish, animals, and people. Non-stormwater discharges are discharges not entirely comprised of stormwater and can be caused by such activities as illegal dumping into the storm drain system or unpermitted discharges from factories.

The Clean Water Act (CWA) establishes the National Pollutant Discharge Elimination System (NPDES), which is a permitting system that regulates point sources of pollution that discharge directly to a state water or a sewage treatment plant. Point sources of pollution are pipes and drains that flow directly to a state water and typically come from industries, some agricultural facilities, and municipalities. Storm sewer systems that discharge to a state water are point sources of pollution and need a permit. The 1987 amendments to the CWA expanded the NPDES program to cover municipal stormwater discharges.

The EPA administers the CWA. Colorado passed the Colorado Water Quality Control Act C.R.S. § 25-8 and was authorized by EPA in 1975 to administer the NPDES program. Requirements in Colorado Discharge Permit System Regulations 5 C.C.R. 1002-61 (Regulation 61), Nutrients Management Control Regulation 5 C.C.R. 1002-85 (Regulation 85), Cherry Creek Reservoir Control Regulation 5 C.C.R. 102-72 (Regulation 72) and Regulations Controlling Discharges to Storm Sewers 5 C.C.R. 1002-65 (Regulation 65) are incorporated into this permit. If more than one regulation has a similar requirement, the more stringent requirement from the applicable regulation is incorporated into this permit. Colorado calls the NPDES program the Colorado Discharge Permit System (CDPS). Colorado is authorized to issue both individual and general permits to MS4s through the CDPS regulations.

The Colorado Department of Public Health and Environment, Water Quality Control Division (division) issued the first general permit to small MS4s permittees in 2003 and it was renewed in 2008. The current permit expired on March 9, 2013. Most permits issued by the division expire in 5 years. Generally, regulated small MS4s are those that serve a population of less than 100,000 and that meet the definition of an “urbanized area” as defined by the US Census Bureau. The US Census Bureau defines an urbanized area as an area with 50,000 or more people. Maps of urbanized areas can be found at: http://www.census.gov/geo/reference/ua/urban-rural-2010.html. The maps are updated every 10 years and the list of small MS4s that need to be covered under this permit reflects the 2010 census urbanized areas maps. There are 63 small MS4s (cities and counties). If one portion of a city or town is considered an urbanized area, then the entire municipality is considered a small MS4 and the entire city or town is the permitted area. Only portions of counties have permitted areas. Counties do not have to implement this permit outside of the permitted area. Even if a small municipality grows to 100,000 people or more, it will not be considered a medium or large MS4. Large and medium MS4s are covered by individual permits. This general permit is being renewed to continue to provide coverage to small MS4 permittees through a general permit. However, any permittee authorized by a general permit may request to be excluded from the coverage of the general permit by applying for an individual permit. The division may also require any permittee authorized by a general permit to apply for and obtain an individual permit.

An example of when an individual permit might be required would be if a Total Maximum Daily Load (TMDL) was developed that identified a wasteload allocation (WLA) for an MS4 permittee that this general permit did not adequately address. In this situation, the division might require the MS4 permittee to apply for an individual permit.

In 2010 and 2011, the division conducted audits of 10 MS4 Phase II permittees and determined that a variety of changes would have to be made to the current permit. Many of the audit findings that drove changes to the renewal permit are described later in this fact sheet.

The division has issued this general permit to control non-stormwater and polluted stormwater runoff from areas in cities, towns, and counties (permittees), such as construction sites, roads, parking lots, and municipal yards for vehicle maintenance and roadway salt and sand storage. This permit authorizes all discharges from the MS4, not just stormwater. This permit requires small MS4s to develop and run a program to control stormwater discharges to the MS4. This permit does not set *numeric limits* for discharges from stormwater outfalls into state waters. Rather, the permit requires municipalities to implement control measures (which include best management practices or "BMPs") in six program areas: public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction sites, post-construction stormwater management in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations.

Public Education and Outreach
The public education and outreach program should inform citizens and businesses about stormwater pollution and illicit discharges and the steps that they can take to reduce stormwater pollution, such as properly disposing of trash and applying pesticides and fertilizers so that trash and excess lawn care chemicals do not wash into local waterways during the next rainstorm.

Public Involvement and Participation
Permittees use this program to offer their citizens an opportunity to comment on the permittee's stormwater program and participate in its implementation, such as a hotline that citizens can call if they see dirt on roadways from construction sites that could wash into a local stream.

Illicit Discharge Detection and Elimination
Illicit discharges can enter a MS4 through the curb and gutter system. Many think that water flowing in curbs and gutters goes to the local sewage treatment plant. This is not typically true in Colorado. Stormwater and all of the pollutants that it picks up in curbs and gutters flows directly to local waterways. Permittees use this program to respond to reports of illicit discharges and clean up potential pollutants such as, used motor oil, grass clippings, leaves, grease from restaurants, and dirty wash water from power washing sidewalks.

Construction Sites
Discharges from construction sites can include pollutants such as sediment, phosphorus, nitrogen, construction chemicals, fuel and oil, and trash and other solid wastes. Permittees use the construction sites program to require construction site operators to install and maintain control measures that control and reduce dirt and other pollutants from leaving a construction site and flowing to local waterways.

Post-Construction Stormwater Management in New Development and Redevelopment
It is less expensive to remove pollutants from stormwater before it enters the MS4 than to treat polluted stormwater after it is discharged to a state water. Construction site operators must install a control measure that will control stormwater pollution from the site after construction is completed. Some control measures slow down fast moving stormwater that can erode streambanks and allow dirt and other pollutants to settle out of the stormwater before discharging the cleaner stormwater into local waterways. Either the property owner or the permittee periodically maintains the control measures and

properly disposes of the dirt, trash, and other pollutants collected by the control measure.

Pollution Prevention and Good Housekeeping for Municipal Operations
Most permittees have municipal yards where vehicles and materials, such as roadway salt and sand, are stored. Uncontrolled stormwater flowing off of these municipal yards can pick up dirt, salt, and other chemicals and deposit the pollutants into a local waterway. Permittees use this program to implement procedures to prevent or reduce the exposure of potential pollutants to stormwater. For example, permittees will cover salt and sand piles, have employee training and procedures for the proper operation and maintenance of the MS4, and sweep the yard of any trash and other potential pollutants and control illicit discharges.

Pesticides
The division is also clarifying in this renewal permit that neither the 2006 federal pesticide rule, the Sixth Circuit Court vacatur of that rule, nor the EPA pesticide general permit (PGP) or division PGP have changed in any way the determination of whether certain types of stormwater runoff are required to obtain permit coverage, or under what type of permit coverage discharge is required. This is true whether the runoff contains pesticides or pesticide residues resulting from the application of pesticides. The previous MS4 general permits and this MS4 general permit already authorize the discharge of pesticides in stormwater from the MS4. Non-stormwater discharges from pesticide applications to waters of the state require coverage under a separate PGP.

In this renewal permit, the division made some minor changes to more clearly list pesticides as a pollutant source to be addressed in the control measures implemented to comply with permit requirements. The previous permit includes pesticides in the definition of significant materials. For this renewal, the division removed the definition of significant materials and instead listed pesticides as a specific pollutant source to be addressed in the requirements associated with construction sites and municipal operations. The division also expects that public education and outreach will continue to address pesticides as a pollutant source in stormwater runoff.

F. COMPLIANCE HISTORY

The division conducted several compliance assistance activities to determine compliance with the previous permit. The results from these compliance assistance activities influenced some of the requirements in this renewal permit.

The division conducted compliance assurance activities for approximately 25 of the 56 MS4 Phase II permittees. Compliance assurance activities included: 10 full program audits, one program audit targeting the construction and post construction programs, and 16 construction site screening inspections. In addition to these field-based compliance assurance activities, the division reviewed file documentation for several permittees. From these activities, the division was able to identify several potential non-compliance issues that appeared to be common across MS4 Phase II permittees regardless of size of the community or apparent robustness of the permit program. The audit findings influenced many of the requirements in this renewal permit.

Because of the level of resources involved in full program audits for all permittees during the permit term, compared to the division's available resources, the division developed a Targeted Permit Questionnaire. This questionnaire targeted specific program elements that were identified as common findings in the audit reports. The questionnaire was not a full audit. The questions were based on the common findings that were identified during permit audits conducted by the division in 2010 and 2011. The questions were developed to help the permittee determine compliance with the previous permit or submit a notice of non-compliance. The division provided permittees 6 months to complete the questionnaire and make the required program changes. The questionnaire included clarifying language

for the permittee to conduct a targeted self-audit from the perspective of a division audit activity. Much of the clarifying language provided in the questionnaire has been expanded and incorporated into the permit renewal.

Information on the findings from the audits and screenings that drove changes to the renewal permit are described in Table 3 in this fact sheet.

G. SCOPE OF THE GENERAL PERMIT

The previous general permit COR080000 expired on March 9, 2013 and has been administratively extended by the division. This renewal permit is needed to continue to provide coverage for these permittees and for any newly-designated permittees.

I. Types of MS4s Covered

Discharges from the following are covered under this renewal permit:

- Regulated small MS4s that are currently covered under the existing COR080000 permit and
- Small MS4s that are required to obtain permit coverage in accordance with Regulation 61.3(2)(f)(v) and Regulation 67.2.2

II. Types of MS4s Not Covered

- Large and Medium MS4s. These are entities that were designated for permit coverage under the 1990 Phase 1 stormwater rule. These entities are currently covered under individual permits and were not contemplated for coverage under this general permit.
- Federal facilities. The division does not currently have NPDES delegation for federal facilities. MS4s designated by EPA for permit coverage in Colorado are currently covered under individual permits issued by EPA and are not contemplated for coverage under this general permit.
- MS4s located on Indian Lands. It is anticipated that any MS4 located on Indian Lands needing permit coverage would be permitted by EPA or a tribal authority.
- Non-Standard MS4s. Entities other than a city or county (non-standard MS4s) who are covered under the general permit for Stormwater Discharges Associated with Non-Standard Municipal Separate Storm Sewer Systems MS4s (COR070000). In general, these entities are not expected to be covered under this general permit. This separate general permit (COR070000) includes requirements that are more appropriate for most non-standard MS4 permittees. The division, however, may require some non-standard MS4 permittees to obtain coverage under this general permit if they are determined to have roles within their operational area similar to a city or county under section 61.3(2)(v) of Regulation 61.
- Discharges from MS4s covered by an individual permit. This includes any municipality that requests coverage under an individual permit or is notified by the division to apply for and obtain an individual permit.
- Discharges from MS4s covered by the COR090000. Small MS4s that do not drain wholly or in part into the Cherry Creek Reservoir drainage basin are not covered under this general permit.

III. Discharge Segments

The division reviewed the applicable stream segments to which current permittees' MS4s discharge and determined the terms and conditions that need to be included in this permit. Stream segments will be identified in the permit certification issued to each permittee under this permit. The

receiving water review focused on impairment, including a review of impaired segments for which a TMDL has been completed and impaired segments for which a TMDL has not been completed.

The review of impaired segments for which a TMDL has been completed is intended to identify whether MS4 discharges were assigned WLAs or load allocations (LAs). Specifically, the review included whether discharges from permittees were identified as sources for which either controls were already in place, need to continue, or for which additional controls are appropriate to achieve additional pollutant reduction to attain the water quality standard. The completed TMDLs that were identified for consideration of permit conditions are discussed in the Part III Section of this fact sheet.

H. STATUTORY AND REGULATORY AUTHORITY

This permit is rooted in the federal CWA, 33 U.S.C. 1251 *et seq.*, and the Colorado Water Quality Control Act, 25-8-101 *et seq.*, C.R.S. The federal CWA and regulations are administered by the EPA. The Colorado Water Quality Control Act and its regulations are administered by the division. The Colorado Water Quality Control Act references the federal CWA. To the extent that the Colorado Water Quality Control Act and its implementing regulations are more stringent than the federal rules, those requirements are implemented via the Colorado Discharge Permit System. The division is responsible for developing permits that are consistent with the CWA, federal regulations, the Colorado Water Quality Control Act, and state regulations.

Congress created the NPDES permit program through enactment of the Federal Water Pollution Control Act (FWPCA) Amendments of 1972. This followed a period of previous water quality legislation where Congress had authorized states to develop water quality standards which were intended to limit discharges of pollutants based on the individual characteristics of waterbodies. The FWPCA Amendments of 1972 introduced the NPDES program including the requirement to include technology based requirements to address a concern about a lack of progress in water quality protection and a lack of enforceability in previous legislation.

The FWPCA Amendments contained four important principles related to the NPDES program as summarized by EPA in its *Water Permitting 101* document:

1. The discharge of pollutants to navigable waters is not a right.
2. A discharge permit is required to use public resources for waste disposal and limits the amount of pollutants that may be discharged.
3. Wastewater must be treated with the best treatment technology economically achievable, regardless of the condition of the receiving water.
4. Effluent limits must be based on treatment technology performance, but more stringent limits may be imposed if the technology-based limits do not prevent violations of water quality standards in the receiving water.

The NPDES permit was created by Congress as the implementation tool for the restriction of the quantity, rate, and concentration of pollutants that the point sources may discharge into water. The division, as the delegated authority for development and issuance of NPDES permit for the state of Colorado, is obligated to develop and issue NDPES permits meet both state and federal statutory and regulatory requirements.

Routine review is an integral aspect of the NPDES program. Congress' expectation is that permits remain current in their ability to incorporate advancements in science and technology, law, and be reflective of current operations resulting in a discharge of pollutants to waters. The division must renew general

permits once every 5 years, and must include such conditions in the renewal permit that are necessary to implement statutory and regulatory provisions.

EPA summarizes the major steps for development and issuance of NPDES permits, as required by 40 C.F.R. § 124, as follows: (EPA, Office of Wastewater Management, Water Permitting 101)

1. Receive application from permittee.
2. Review application for completeness and accuracy.
3. Request additional information as necessary.
4. Develop technology-based effluent limits using application data and other sources.
5. Develop water quality-based effluent limits using application data and other sources.
6. Compare water quality-based effluent limits with technology-based effluent limits and choose the more stringent of the two as the effluent limits for the permit.
7. Develop monitoring requirements for each pollutant.
8. Develop special conditions.
9. Develop standard conditions.
10. Consider variances and other applicable regulations.
11. Prepare the fact sheet, summarizing the principal facts and the significant factual legal, methodological and policy questions considered in preparing the draft permit including public notice of the draft permit, and other supporting documentation.
12. Complete the review and issuance process.
13. Issue the final permit.
14. Ensure permit requirements are implemented.

I. DISCUSSION OF KEY REGULATORY TERMS AND CONCEPTS

This section provides a discussion of key regulatory terms and concepts that are unique to MS4 permits.

"Maximum Extent Practicable" (MEP) Standard
33 U.S.C. 1251 *et seq.*, section 402(p)(3)(B), of the CWA requires discharge permits from municipal storm sewers. Section 402(p)(3)(B)(iii) of the CWA states that permits issued to municipalities "shall require controls to reduce the discharge of pollutants to the **maximum extent practicable** *[emphasis added]*, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the state determines appropriate for the control of such pollutants." In addition, 33 U.S.C. 1251 *et seq.*, section 402 (p)(3)(B) of the CWA states that permits issued to municipalities shall "include a requirement to effectively prohibit non-stormwater discharges into the storm sewers."

Section 61.8(11)(a)(i) of Regulation 61 states the following:

> *At a minimum, the MS4 permit will require that the regulated small 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****) [emphasis added], 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.). The stormwater management program must include the minimum control measures described in subsection (ii) of this section, unless the small MS4 applies for a permit under 61.4(3)(c). Implementation of BMPs consistent with the provisions of the stormwater management program required pursuant to this section and the provisions of the permit required pursuant to subsection (ii) constitutes compliance with the standard of reducing pollutants to the MEP.*

Maximum extent practicable is a statutory standard that directs the permitting authority to establish the level of pollutant reductions that all MS4 operators must achieve and is discussed in *40 C.F.R. Parts 9,*

122, 123, and 124 National Pollutants Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule; Report to Congress on the Phase II Storm Water Regulations; Notice (December 8, 1999). This is commonly referred to as the Phase II Final Rule.

The regulatory requirements of the rule Volume 64, number 235, page 68754 of the Phase II Final Rule states that "EPA envisions application of the MEP standard as an iterative process. MEP should continually adapt to current conditions and BMP effectiveness and should strive to attain water quality standards." The division also envisions application of MEP as an iterative process, consistent with EPA's discussion in the Phase II Rule. This permitting approach is unique to MS4 discharges and distinct from the direction provided for permitting other sources in the NPDES framework. How the division determines MEP is discussed below.

In determining the level of control to be required for this permit term, the division determined that the level of control should reflect the average of the best existing performance at the time of permit renewal as described further below.

In plain language the division interpreted the term "maximum extent" to mean that that standard was not intended to be the minimum, or the average, or a single maximum, but a maximum that can be achieved by permittees operating a compliant program. The division has also looked to how the term "practicable" is applied within other parts of the CWA framework, specifically within establishment of technology based controls within the ELG framework. EPA sets Best Practicable Control Technology Currently Available (BPT) for effluent limitations for conventional, toxic, and non-conventional pollutants. 33 U.S.C. 1251 *et seq.*, section 304(b)(1) of the CWA lists the factors that EPA must consider when setting BPT. The standard for BPT is defined by EPA as "the first level of technology-based standards established by the CWA to control pollutants discharges to waters of the U.S." BPT guidelines are generally based on "the average of the best existing performance by plants within an industrial category or subcategory." This provides practical guidance to permitting authorities on what to look for in establishing an MEP standard. This approach recognizes that there are municipalities that implement programs that go beyond the MEP standard, and is consistent with the goal of establishing a standard that all municipalities can and must implement. The permitting authority is directed to establish the MEP standard, in recognition that implementation beyond that standard will be feasible and appropriate for some municipalities. Permittees are not tasked with setting MEP. The division sets the requirements that make up MEP.

The routine review process implemented through permit renewal is how permitting authorities are able to iteratively refine the MEP standard through permit requirements. This provides the opportunity to continually adapt to current conditions and control measure feasibility and effectiveness.

How the division Determines MEP
The division has used multiple sources to determine MEP for the various MS4 program areas. The documents are listed in the references section of this fact sheet. The applicable sections of the documents are listed throughout this fact sheet. The most used references are listed below:

- Applicable laws and regulations
- Audits and screenings of municipalities covered under this permit
- Stakeholder input obtained in advance of preparing the permit
- MS4 permits in effect issued by other permitting authorities (states and EPA)
- Published studies (e.g., info on green infrastructure, etc.)

Compliance with MEP relative to the requirements found in Regulation 61, will constitute meeting the effluent limitations in accordance with Part I.E (Pollutant Restrictions, Prohibitions, and Reduction Requirements and Recordkeeping), and Part III of the renewal permit as applicable to a specific MS4

permittee. The effluent limitations are established for program areas in Part I.E covering Public Education and Outreach, Illicit Discharge Detection and Elimination, Construction Sites, Post-Construction Stormwater Management in New Development and Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations.

For this permit term, the division has determined that additional provisions are not necessary to result in control of pollutants beyond the MEP standard. The division has included monitoring and reporting conditions for some discharges that have been assigned WLAs in a TMDL determination, and to further characterize certain non-stormwater discharges that are not separately permitted. The permit now includes a process for the division to respond to new information, such as a TMDL, that becomes available during the permit term.

As stated above, MEP is a statutory standard that directs the permitting authority to establish the level of pollutant reductions that all MS4 operators must achieve. Relative to Regulation 61, the division established MEP in the permit by including clear, specific and measurable requirements. However, in regard to Regulation 72, the division has determined that the requirements in the regulation are clear, specific and measurable enough on their own to constitute MEP (for Regulation 72 specific requirements).

It is also important to note that the **purpose o**f Regulation 72 is "to reduce the inflow total phosphorus concentrations to Cherry Creek Reservoir "(72.3). In contrast, the purpose of the MS4 requirements in Regulation 61 is more broad, including "…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.." ((61.8(11)(a)(i)) Because of their different objectives, some MS4 requirements in Regulation 61 are not included in Regulation 72. For example, Regulation 61 requires "illicit discharge detection and elimination" but Regulation 72 does not include additional total phosphorus concentration requirements for illicit discharges. Regulation 61 requires a reduction of the discharge of pollutants (not just phosphorus). Therefore, compliance with the total phosphorus concentration requirements in Regulation 72 does not necessarily result in compliance with a MS4 requirements in Regulation 61. Permittees must comply with *both* Regulation 61 and Regulation 72 MS4 requirements.

The permit makes it clear that the more stringent requirement applies, in cases where requirements incorporated by reference from Regulation 72 and requirements specified in the permit based on Regulation 61 overlap.

Effluent Limitations
The Colorado Water Quality Control Act C.R.S. § 25-8-503(4) states that "no permit shall be issued which allows a discharge that by itself or in combination with other pollution will result in pollution of the receiving waters in excess of the pollution permitted by an applicable water quality standard unless the permit contains effluent limitations and a schedule of compliance specifying treatment requirements. Effluent limitations designed to meet water quality standards shall be based on application of appropriate physical, chemical, and biological factors reasonably necessary to achieve the levels of protection required by the standards."

The EPA develops effluent limitation guidelines (ELGs) based on technology based standards. The ELGs can be downloaded from water.epa.gov/scitech/wastetech/guide/industry.cfm. Technology based standards promulgated as ELGs do not apply to MS4 permits. The EPA, however, has initiated rulemaking to establish performance standards for discharges from newly developed and redeveloped sites, but the rule has been remanded and has not been considered in this renewal permit.

Section 61.2(26) of Regulation 61 defines an effluent limitation as "any restriction or prohibition established under this article or Federal law 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." The division has defined and considers the management practices, control techniques, and system design and engineering methods to be effluent limitations. The management practices, control techniques, and system design and engineering methods required by this permit are effluent limitations in that they are restrictions or prohibitions on the quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharge from MS4s into state waters. This is consistent with the definition of effluent limitation contained in Regulation 61. For the purpose of this permit, the division has established effluent limitations, and has frequently referred to those as "pollutant restrictions, prohibitions, and reduction requirements" in the permit text.

Numeric Effluent Limitations vs. Practice-Based Effluent Limitations
There are no *numeric* effluent limitations included in this permit. This permit contains *practice-based* effluent limits. Stormwater and non stormwater management requirements are the controls that are used to achieve reduction of pollutants in the stormwater discharges from MS4s in this permit. The division has determined that the terms and conditions in the permit are necessary to ensure the required compliance with the applicable regulations and meet MEP.

The division has clarified that the scope of the permit is limited to authorizing discharges from MS4s. The permit also clarifies the types of discharges that are conveyed and discharged through the MS4 that need to be separately permitted. The permit explicitly states that it does not remove the responsibility for the responsible party of a discharge to obtain separate CDPS or NPDES permit coverage or report spills when required in accordance with the Colorado Water Quality Control Act and Regulation 61. The division does not have the authority to exempt any responsible party for a point source discharge from the requirement to obtain permit coverage or the authority to modify the definitions of point source or discharge. Therefore, the determination in the permit of whether a discharge to the MS4 is an illicit discharge has no bearing on the statutory and regulatory requirements for point source discharge permitting and for reporting unpermitted discharges. The division has intentionally not required permittees to prohibit, detect, and eliminate certain discharges that are covered by the division's Low Risk Policies. This allows the permittee to focus on discharges that have the greatest potential to cause water quality impacts. This will also promote transparency and consistency between permittees and the division in how these discharges are addressed on a day-to-day basis.

Individual vs. General Permits
This permit is a general permit. Section 61.9(2) of Regulation 61 states that "the division may issue a general permit to cover a category of discharges, except those covered by individual permits, within a geographic area which shall correspond to existing geographic or political boundaries." The section also states that general permits shall be written to regulate stormwater point sources. A general permit must set the MEP for all of permittees, regardless of size, number of outfalls, number of active construction sites, number of staff, stormwater budget, etc. The renewal points out the flexibility built into the permit requirements and adds additional flexibilities.

J. Permit Term

Permits are issued for a term of 5 years and can be administratively extended. Upon expiration, the division must reissue the permit to include such conditions in the renewal permit that are necessary to implement state and federal requirements. This comprehensive permit renewal acts on new information resulting from sources including the division's compliance oversight activities, other state permits, case law, EPA guidance, and further evaluation of statutory and regulatory direction.

K. RATIONALE FOR CHANGES FROM THE PREVIOUS PERMIT

The division substantially revised the framework of the renewal permit. The rationale supporting the changes is primarily covered in each of the sections below, starting with Part I.

There were many concerns between the previous permit and the renewal permit. Some global concerns associated with the previous permit and the renewal and how those issues are addressed in the renewal permit are listed below:

Clarification of the Basis for Determining Permit Terms and Conditions
The division develops permit terms and conditions as directed through federal and state statutes and implementing regulations as summarized below

All NPDES permits are required to contain effluent limitations. In this case of MS4 permits these effluent limitations are derived to meet the MEP standards, and additional requirements can be included as necessary to meet water quality standards, as previously described.

The previous permits were not clear regarding which terms and conditions were intended to reduce pollutants in the discharge, and which terms and conditions were intended to be associated with monitoring, recordkeeping, and reporting.

All NPDES permits are required to contain monitoring requirements under section 61.8(4) of Regulation 61. Federal and state permitting regulations require that at a minimum permits specify monitoring requirements for each pollutant limited in the permit. Permits must specify monitoring equipment, methods, intervals, and frequencies sufficient to yield data which are representative of the monitoring activity and must specify the content of records to be maintained, and records retention requirements. The section 61.8(4) of Regulation 61 establishes a threshold of "reasonableness" in directing the derivation of monitoring and recordkeeping requirements. For development of this permit, the division determined the monitoring and records logically needed to meet the threshold of representative of the monitoring activity, demonstrate that the monitoring was adequately performed, document the conditions surrounding the event and what was observed, and document findings and actions taken, while not including superfluous requirements.

In this case, the monitoring and recordkeeping requirements include the development of documents such as standard operating procedures (SOPs). SOPs are documents that describe how to perform various operations within the permittee's stormwater program. Policies, standards, processes, and procedures must be written down, approved, and communicated to all concerned. They provide step-by-step instructions and assure consistency, accuracy, and quality.

Recordkeeping allows a permittee to communicate accurately and effectively to staff and construction operators. Recordkeeping enables the permittee, applicable construction site operators, and others participating in the stormwater program to be timely in reporting to the division and the permittee. In addition, recordkeeping helps to minimize errors and allow for a periodic review of the success of the stormwater program. Opportunities for stormwater program improvements can also be identified through the review of records.

The Colorado Water Quality Control Act, and federal Clean Water Act, Colorado Discharge Permit Regulations (5 CCR 61), and federal discharge permit regulations (40 C.F.R. § 122, 124, etc), do not require formal monetized cost benefit analyses for development of permit terms and conditions. Nevertheless, the division will consider cost when selecting the appropriate permit term or condition, and will choose the least costly alternative that meets the requirements for the MS4 permit. The division

considered the cost-benefit analysis of the first draft of the renewal permit provided by the Colorado Stormwater Council and adjusted and modified the permit where possible to adhere to the regulations in the most cost effective manner.

Incorporation of Guidance into Permit
The permit was also revised to incorporate the requirements for meeting the MEP standard. During previous permit terms, the division provided a comprehensive guidance document outside of the permit to clarify the intent of the permit and expectations for compliance entitled *Colorado's Phase II Municipal Guide: A Guide to Application Requirements and Program Development for Coverage under Colorado's Phase II Municipal Stormwater Discharge Permit* (October 2001). The division also conducted frequent meetings with stakeholders, sent emails and memos, and developed audit reports. This patchwork of documentation comprised the standards and division interpretations. The division then used submittals, public notice of permittee program description documents, and oversight to review a permittee's controls implemented to reduce the discharge of pollutants to determine compliance with the MEP standard.

This permit includes more extensive permit language because it replaces much of the language previously included in guidance and eliminates the need for submittal, approval, and public notice of program description documents. The overall clarity is expected to increase by consolidating and removing document duplication from referencing multiple documents. While the renewal permit is longer than the previous permit, the overall length of the renewal permit is shorter compared to the previous permit plus guidance under the previous term. This permit also removes the additional process of program description document submittal and review by the division, which resulted in significant workload for both the permittees and the division. These changes also ensure that stakeholders have the opportunity to review and comment on draft language, including language that was previously contained in division guidance documents or permittee program submittals.

Pollutants of Concern
Public comments on the first draft of the renewal permit requested that trash be addressed as a pollutant of concern more clearly in the permit. The division always intended that trash be a pollutant of concern to be addressed through implementation of an MS4 stormwater program, and agreed that the permit could be more clear in this regard. Although no new requirements on trash control have been added to the permit, trash has been included in the list of pollutants of concern for several existing requirements.

Implementation by Entities other than the Permittee:
Some permittees use other permittees, consultants, or contractors to implement all or portions of their stormwater program. This is allowed and permittees should note Part I.F.5 of the renewal permit.

Consistent Terminology
Where applicable the division used consistent terminology throughout the permit. For example, the term "project" was removed and replaced with the term "site". While the terms are synonymous, the division felt it was important to use the same term throughout the permit and fact sheet.

From this point forward, the organization of the fact sheet follows the order of the renewal permit to provide clarity to the reader.

I. PART I

A. COVERAGE UNDER THIS PERMIT

1. Discharges Authorized Under this Permit

The discharges eligible for coverage under this permit include those formerly covered under the previous permits. This renewal permit authorizes discharges of stormwater from municipal separate storm sewer systems that meet the designation criteria in Regulation 61.3(2)(f)(v) and discharge wholly or in part to the Cherry Creek Reservoir drainage basin, except facilities that meet the designation criteria in the Regulation 61.3(2)(f)(v)(A)(II) that are permitted with the non-standard MS4 general permit or permittees that do not discharge wholly or in part to the Cherry Creek Reservoir drainage basin. Small MS4s that do not discharge wholly or in part to the Cherry Creek Reservoir drainage basin are covered under the COR090000 general permit except facilities that meet the designation criteria in the Regulation 61.3(2)(f)(v)(A)(II) that are permitted with the non-standard MS4 general permit.

This section was added to the renewal permit to insert important definitions that will be used throughout this section and the permit.

All discharges from the MS4 within the permit area to waters of the state are authorized under this permit. This includes permit coverage for all stormwater discharges and non-stormwater discharges from the MS4. Authorized discharges also include discharges that have separate permit coverage for the discharge to waters of the state from a facility or activity from which the discharge originates.

Permit coverage is required for discharges from MS4s to surface water. However, permit coverage for land application of discharges from an MS4 and discharges from an MS4 to the ground is not expected to be necessary. In addition, section 61.14 of Regulation 61 specifically exempts “any stormwater retention or detention impoundment” from coverage under the ground water discharge provision of the regulation. Discharges to ground water, therefore, are not included in this permit.

Permittees should note that Regulation 61 addresses “illicit discharges” in several sections. The permit uses the definition of illicit discharge from Section 61.2(42) of Regulation 61.

MS4s includes roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains. In addition, MS4s also include systems and conveyances that are not typical (see 2. Below). Permittees should also note that four criterion must be met in order for a system or conveyance to be considered an MS4. There are many types of conveyances or systems that are not MS4s.

1. The system or conveyance must be owned or operated by the permittee. In other words, the permittee must have jurisdictional control over the system or conveyance. Please see the definition of a permit area since these criteria must also be met. In other words, if the permittee does not own or operate the street or catch basins, then they are not part of the MS4.
2. The area must be designed or used for collecting or conveying stormwater. One conveyance often overlooked by a permittee is a conveyance that is not listed above (i.e., municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains) adjacent to a state water. This unique conveyance that is adjacent to a state water must meet the following requirements in order to be considered an MS4:
    a. The conveyance must be owned or operated by the permittee (similar to 1. above), but also must be owned or operated by the permittee through an

agreement, contract, direct ownership, easement, or right-of-way. If the easement is only for a utility, then it is NOT considered part of the MS4.

b. The conveyance must be used to manage flood plains, stream banks, and stream channels. If the conveyance is only used for another purpose, then the conveyance is not part of the MS4.

3. The system or conveyance cannot be part of a combined sewer outfall system. This is uncommon in Colorado.
4. The system or conveyance cannot be part of a publically owned treatment works.

To clarify the topic of areas adjacent to state waters, this permit also provides clarification for what constitutes an MS4. First, a parcel/area must be located within and discharge to the MS4 permit area. Second, the parcel/area must be under the jurisdictional control of the permittee.

Areas that are adjacent to a state water may meet the two above criteria for what constitutes and MS4. For example, some permittees have jurisdictional authority over areas, such as drainage easements or right-of-ways, which are adjacent to a state water and which the permittee maintains. These areas can serve a variety of functions, including collecting and conveying stormwater to the state water. Since an MS4 is a conveyance or system of conveyances that are "designed or used for collecting or conveying stormwater", these areas/easements/right-of-ways could be included in the permit area. Examples of activities that could include be conducted adjacent to state waters include streambank stabilization activities or managing flood plains. In these examples, if a site is located within the permit boundary AND discharges stormwater onto a streambank maintained by the permittee, the streambank WOULD BE included considered part of the MS4. Another example of an activity that would be considered part of the MS4 would be: a site that discharges directly into the stream and transfers ownership of the pipe to the MS4 permittee.

Alternatively, some permittees have no jurisdictional authority, such as drainage easements, easements, or right-of-ways, adjacent to certain state waters. Or, some permittees have an easement or right-of way, but not for the purpose of collection and conveying stormwater to that state water. These areas that are adjacent to state waters WOULD NOT be included in the permit area. An example of an area that would NOT be considered part of the MS4 would be a site that discharges directly into a stream or on a streambank through a privately-owned pipe, where the permittee has no jurisdictional authority or drainage easement. Note that in this example, no part of the site, such as the end of a driveway or part of a parking lot, would discharge to the permittee's MS4. If any portion of the site discharges into the permittee's MS4, then the site would be part of the permittee's MS4. Permittees should note that the division could separately permit these types of discharge through section 61.3(2)(a) of Regulation 61 for any site outside of the permittee's permit area.

This section of the renewal permit *does not* address permit area boundaries. Permit boundaries are covered under Part I.A.3 (below).

2. Limitations on Coverage

The division is not including in this permit authorization for point source discharges other than the discharge from the MS4 for which the permittee is the operator of the facility or activity from which the discharge originates. Inclusion of terms and conditions for all additional point source discharge for which the permittee may be the operator was outside the scope of consideration for this permit. For example, this permit does not authorize the

permittee to discharge stormwater associated with industrial activity from its own construction activities, even when such discharge is to the permitted MS4. The permittee must obtain separate permit coverage (i.e., obtain a stormwater discharge permit for construction activities) for such discharges.

The division modified this section in the renewal permit to clarify that discharges to a receiving water designated as an "outstanding water" are not eligible for coverage under this permit. The division has determined that a more detailed analysis would be needed to determine if provisions for the control of pollutants beyond those included in this permit would be appropriate. The Water Quality Control Commission has not designated any outstanding waters in an MS4 permit area as of the issuance date of this renewal permit.

The permittee permit area is defined in IX.Part I.A.3 (below). Permittees are only responsible for implementing this permit in their permit area.

This section was expanded from the previous permit to address confusion concerning irrigation ditches. This clarification was added to the permit to address concerns from stakeholders, including those in the Grand Valley, regarding potential future responsibilities for compliance with MS4 permit requirements if large irrigation ditch systems were regulated as MS4s. Those conveyances for which the majority of flow is irrigation return flow and/or supplying irrigation water to irrigated land (i.e., irrigation ditches) that are identified in the permittee's application or subsequent modification as not being part of the MS4 and are listed in the permit certification are excluded from being part of the MS4. The permittee has the flexibility to make a determination on if the conveyance typically has majority of irrigation flow before submitting the information in the application or in a subsequent submittal. This option would result in excluded irrigation ditches being treated consistent with state waters with a classification in a basin regulation (classified waters). The MS4 outfall is moved to the location where the discharges occur into the irrigation ditch, instead of being at the location where the irrigation ditch returns flow to a receiving water.

In addition, section 61.3(1)(c) of Regulation 61 states that "neither the Commission nor the division shall require any permit for animal or agricultural waste on farms and ranches except as many be required by the Federal Act or regulations or be section 25-8-501.1, C.R.S., or the state act which provides that permits shall be required for housed commercial swine feeding operations." Permittees should be advised that applicable construction activities occurring at farms and ranches are covered under this permit. This coverage does not include facility operation activities like tilling fields.

3. Permit Area

The US Census Bureau mapped 652,443 acres of urbanized area in Colorado in the 2000 census and 819,342 acres in the 2010 census. That is an increase of 166,899 acres or 20.4 percent.

a. This renewal permit does not apply to any areas outside of the permit area.

i. This section has been simplified in the renewal permit.

ii. Section 61.3(2)(f)(v)(A)(III)(a) of Regulation 61 states that "the division shall evaluate, at a minimum, any small MS4 located outside of an urbanized area serving a jurisdiction with a population density of at least 1,000 people per square mile and a population of at least 10,000 (based on the latest Decennial Census by the Bureau of

the Census), to determine whether or not stormwater discharges from the MS4 result in or have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. The evaluation shall use the following elements, at a minimum: discharge to sensitive waters; *high growth or growth potential* [emphasis added]; size of population and population density; contiguity to an urbanized area; and significant contribution of pollutants to state waters. Sensitive waters, for the purposes of this section, are defined as those receiving waters that are classified by the Commission as either Aquatic Life Class 1, a Drinking Water supply, or are on the division's most current 303(d) list (i.e., need a TMDL)."

Permit areas in counties include the urbanized area as determined by the US Census Bureau in the 2010 census, plus the high growth or potential growth area, minus the no growth area. The division has modified the portions of Part I.A.3(b) and Part I.E of the renewal permit that pertain to the application of "Growth Area Requirements." These requirements have been further expanded to allow for a more proactive and effective approach to water quality protection in areas with high population growth and growth potential. The division stated in the previous permit fact sheet that it intended to review the previous permit boundaries for permittees covered under this general permit to determine if currently unpermitted areas outside of a urbanized area designated by the US Census Bureau meet the designation criteria in Regulation 61.3(2)(f)(iii) and (v). The changes to the permit do not change the process or requirements for designation, which are included in Regulation 61. The growth area requirements shall apply when such designation is based on actual or potential significant contributions of pollutants associated with construction and development to support high population growth or high growth potential. The criteria for designation in the permit is intended to identify when these conditions for potential significant contributions exist. Counties must submit maps of the growth area and no growth areas or the division has determined that an area 5 miles (within the county's jurisdiction) from the urbanized area shall be the growth area.

The renewal permit contains special requirements or exemptions for these high growth or growth potential areas (see below). The renewal permit requires local control of pollutant sources during the period of significant construction in an area, instead of after an area has already been developed and the water quality impacts from construction associated with the growth may have occurred. The renewal permit allows the permittee to focus on implementation of programs most applicable for areas with growth, but without established populations. The renewal permit also requires the implementation of permanent water quality controls for new development/redevelopment projects to prevent impacts associated with the future population at a time when installation of structural controls is most practicable.

iii. Non-urbanized Non-growth Areas: The renewal permit continues the expansion of the permit area beyond the urbanized and growth area requirements to include all areas of the MS4 that drain wholly or in part into the Cherry Creek Reservoir Drainage Basin. This is the same approach as the current permit and has been done to implement the requirements of Regulation 72.

b. The renewal permit states that the permittee's stormwater program must immediately cover areas annexed or incorporated into the permittee's permit area.

4. County Growth Area Requirements

   In accordance with Section 61.3(2)(f)(v)(A)(III)(a) of Regulation 61, the division must evaluate areas outside of the urbanized areas. The division did not include reporting or requirements for activities beyond the designated growth areas. Several The renewal permit requires that the county permittees submit a map of their growth areas or map and rationale of why an area is a no growth area. The division will designate a growth area of 5 linear miles beyond the urbanized area as a buffer area if a county permittee does not submit any growth area information.

   For counties covered under this permit, this section excludes the requirements for permittees to implement the illicit discharge and elimination, pollution prevention/good housekeeping for municipal operations, and monitoring. The counties are however, still required to implement Regulation 72 requirements in growth areas. Non-county permittees are not subject to the exclusions listed in this section.

5. Application for New and Renewal Applicants

   Section 61.8(11)(a)(i) of Regulation 61 states "The initial permit for the regulated small MS4 will specify a time period of up to five (5) years from the date of permit issuance for development and implementation of the program."

   The division combined the requirements for new and renewal applicants, and provided additional clarification regarding the process if the division denies the application for coverage under the general permit.

6. Local Agency Authority

   Section 61.1(1) of regulation 61 states that "Nothing in these regulations shall be construed to limit a local government's authority to impose land-use or zoning requirements or other limitations on the activities subject to these regulations." This section of the renewal permit has been updated to provide more clarity on local agency authority.

7. Permit Compliance

   The division added this section to the renewal permit to clarify conditions that constitute a violation of the permit, such as failure to comply with the terms and conditions of the permit; failure to perform corrective actions, etc.

B. **CONTROL MEASURES**

Regulation 61.2(9) defines best management practices as "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."

The definition of BMP in regulation 61 is the same definition that was used in the previous permit. EPA has been using the term "control measure" in stormwater permits since at least the 2000 multi-sector general permit. The renewal permit uses the term "control measure" to be consistent with the state and EPA definitions.

The division uses the term "control measure" (defined in Part I.B.) instead of "BMP" throughout the renewal permit. This term has a broader range of meaning than BMP since it includes both BMPs and "other methods." The term "control measure" better describes the range of pollutant reduction practices a permittee may implement. For example, control measures may include the following, not all of which may be encompassed within the definition of BMP:

- Specific pollution prevention practices for minimizing or eliminating the pollutants or constituents of concern in the discharge.
- Specific behavioral practices for minimizing or eliminating the pollutants or constituents of concern in the discharge.
- Narrative requirements to minimize pollutants or constituents of concern in discharges or the discharges themselves.
- Structural controls, not just treatment requirements but treatment in place, such as regional facilities, silt fence, etc.

Consistent with the previous permit, the division does not mandate a specific control measure that a permittee must implement to control pollutant sources. The permittee has the flexibility to select appropriate control measures that when implemented, enable the permittee to meet permit requirements.

Many stakeholders were opposed to the use of the term "control measure". Permittees are not required to adopt the use of the term and there is no requirement for permittees to adopt the use of the term in their regulatory mechanism, procedures, or other documents. Permittees have the flexibility to use either term, but should take into consideration that the term "control measure" is more broad and can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices. Permittees have the flexibility to use either term in SOPs, inspections forms, and other documents.

Control measures required throughout the permit must be selected, designed, installed, implemented, and maintained in accordance with good engineering, hydrologic, and pollution control practices. In many instances, manufacturer's specifications can be used to determine if the control measure is selected, designed, installed, implemented, and maintained in accordance with good engineering, hydrologic, and pollution control practices.

1. Good Engineering, Hydrologic and Pollution Control Practices

   This section of the renewal permit was added to provide additional clarification.

2. Maintenance

   Maintenance is an integral part of an effective control measure. In addition, this section of the renewal permit is important to provide additional clarification for the Control Measure Requiring Routine Maintenance section below.

3. Inadequate Control Measures

   This renewal permit provides definitions of and the differences between an "inadequate control measure " and a "control measure requiring routine maintenance." The division recommends that permittees consider both inadequate control measures and control measures requiring routine maintenance when developing enforcement response procedures.

For example, the renewal permit requires the permittee to conduct a compliance inspection (can be conducted by the operator) and inspection follow up when an inadequate control measure has been identified, but not when a control measure requiring routine maintenance has been identified. Permittees have the flexibility to determine the actions necessary after a control measure requiring routine maintenance has been identified during an inspection.

4. Control Measure Requiring Routine Maintenance

   Maintenance of temporary control measures at construction sites usually includes the removal of accumulated pollutants and minor structural repairs. The permittee has the flexibility to further define routine maintenance.

5. Minimize

   The division uses and defines the term "minimize" to provide the permittee with the level of performance of control measures that should be implemented to achieve effluent limitations.

C. PROGRAM DESCRIPTION DOCUMENT (PDD)

Section 61.8(11)(a)(i) of Regulation 61 states that "the MS4 permit will require that the regulated small 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.)." The division has determined that "develop" requires the permittee to determine which control measures they will implement to meet the requirements of the permit and then develop a written PDD to document their decisions. Permittees must develop a PDD that describes how the permittee will meet all of the requirements in the renewal permit.

The division has substantially modified this section. The previous permit framework required that a PDD be developed that addressed pollutants of concern and required the permittee to develop and implement requirements to meet MEP. The division has changed this framework and has provided the requirements that meet MEP in the renewal permit. The division has relocated the practice-based permit conditions to a new section titled "Pollutant Restrictions, Prohibitions, and Reduction Requirements and Recordkeeping", addressed in section Part I.E.

The information in the PDD is not the same as information required in the recordkeeping sections of the permit. The recordkeeping sections address written documentation of the activities in the PDD that have been completed.

The PDD is not just a "paperwork exercise", rather it organizes what control measures will be/are being implemented, determines appropriate funding and staff needs, and trains new staff on all of the different elements of the stormwater program to help with consistency. In addition, the PDD is a publicly–available document that provides transparency to the public. Although records and the PDD's primary use are for the permittee to develop, implement, and modify (if needed) a successful and legally enforceable program, the division will use both records and the PDD when inspecting or auditing the permittee's program.

The required elements of the PDD were purposely chosen to allow the PDD to be used as an internal training tool and to provide continuity in the case of permittee staff changes. Program audits indicated that there may be substantial lag time and potential non-compliance when new

staff is hired, specifically a stormwater coordinator, because the permittee lacked a complete document to facilitate staff transitions and continued compliance.

The division did not include the requirement that the PDD be organized to mirror the structure of the permit in response to stakeholder input. The permittee has the flexibility to organize the PDD in a way that will be effective for their staff.

1. Records

   The PDD must be up-to-date and document the current implementation of each control measure. This will allow for effective and efficient implementation by the permittee, oversight by the division, and meaningful public involvement. Table 3 summarizes the findings from the audit reports. All of the permittees that were audited did not have an up-to-date/current PDD in one or more portions of their stormwater program, so this requirement has been added to the renewal permit.

   Permittees have always been required to "document" their stormwater programs. Most audited permittees either kept all original documentation in the PDD or listed citations for documents and electronic records in the PDD. Permittees can develop their PDD using either method. Electronic records include regulatory mechanisms, plans, procedures, intergovernmental agreement, codes, manuals, guidance, etc.

2. Availability

   Section 61.8(11)(a)(vii)(B) of Regulation 61 requires that “The permittee must make the records, including a description of the permittee's stormwater management program, available to the public at reasonable times during regular business hours (see 61.5(4) for confidentiality provision). (The permittee may assess a reasonable charge for copying. The permittee may require a member of the public to provide advance notice.)”

   The PDD is developed and maintained by the permittee and only submitted to the division upon request. This is a substantial change from the previous permit, which required the submittal of the permittee’s PDD. The permit no longer requires the division to review, approve, and provide public notice on the PDDs during the general permit certification process. In addition, permittees had to submit information to the division when they modified the PDD. This change also resulted in the program modification section of the previous permit no longer being applicable and has been removed.

   The renewal permit includes a requirement that the PDD be submitted to the division within 10-days of a request. This timeframe recognizes that a document that is intended to reflect current conditions must be updated periodically and may not be immediately available.

3. Modification

   Permittee feedback during audits indicated that permittees were reluctant to make changes to their program descriptions submitted to the division under the previous permit because of confusion or concern over the division’s review and approval process. The renewal permit has specific requirements for the PDD and allows the permittee to tailor and modify their selection and implementation of controls as needed. Permittees no longer need division review or approval to modify their PDD. In addition, the renewal permit eliminates the requirement that the PDD receive public notice. Instead, the renewal permit includes all of

practice-based effluent limitations and will receive public notice and comment through the permit development process.

D. PUBLIC INVOLVEMENT/PARTICIPATION

Section 61.8(11)(a)(ii)(B) of Regulation 61 states:

> *Public involvement/participation. The permittee must, at a minimum, comply with state and local public notice requirements when implementing the stormwater management programs required under the permit. Notice of all public hearings should be published in a community publication or newspaper of general circulation, to provide opportunities for public involvement that reach a majority of citizens through the notification process.*

Volume 64, number 235, page 68755 of the Phase II Rule gives two benefits of public participation. "*First, early and frequent public involvement can shorten implementation schedules and broaden public support for a program.*" "*Second, public participation is likely to ensure a more successful storm water program by providing valuable expertise and a conduit to other programs and governments.*"

Volume 64, number 235, page 68787 of the Phase II Rule states that:

> *EPA believes that an educated and actively involved public is essential to a successful municipal storm water program. An educated public increases program compliance from residents and businesses as they realize their individual and collective responsibility for protecting water resources (e.g., the residents and businesses could be subject to a local ordinance that prohibits dumping used oil down storm sewers). Finally, the program is also more likely to receive public support and participation when the public is actively involved from the program's inception and allowed to participate in the decision making process.*

The Public Participation section requires the permittee to actively involve the public in the development and implementation of the stormwater program. This includes a requirement that the permittee set up a process to respond to public complaints of illicit discharges, pollution from construction sites, pollution from municipal yards, etc. On the other hand, the Public Education and Outreach section requires the permittee to educate the public about the impacts of polluted stormwater and the steps that the public can take to reduce stormwater pollution.

The division has moved the Public Involvement/Participation section from the Pollutant Restrictions, Prohibitions, and Reduction Requirements and Recordkeeping section, because these are not practices implemented to minimize the discharge of pollutants to the MS4. A requirement for the permittee to accept and respond to public information that was in the Construction Sites program has also been relocated to consolidate Public Involvement and Participation.

1. Public Involvement and Participation Process

   "At a Minimum"
   Regulation 61 uses "at a minimum" throughout the regulation to set a minimum standard. Permittees may incorporate additional standards into their program, but the permit outlines the minimum elements that must be met under each requirement to meet MEP.

Volume 64, number 235, page 68755 of the Phase II Rule states that "public involvement is an integral part of the small MS4 stormwater program." The public has two opportunities to comment—they can comment on the requirements listed in this permit through the division's public notice process and can comment on a permittee's specific stormwater program elements, such as the regulatory mechanism and PDD.

a. The permittee must follow their own public notice procedures (if applicable). In addition, the permittee must follow the public notice requirements required by their state or local regulatory mechanism . For example, many municipalities require a public notice process when updating a code or ordinance. Alternatively, if the permittee does not have a required public notice process when updating a document such as a PDD, then the permittee does not have to implement their public notice procedures. This permit requirement simply requires the permittee to follow their own public notice procedures, when required, when implementing the requirements of this permit.

b. The first sentence of this requirement has not changed from the previous permit. The division, however, has added the second sentence as a requirement. Although a web page dedicated to the permittee's stormwater program is not required under this permit, a statement on the permittee's web site must be provided stating that the PDD is publically available for review and comment.

c. The public typically calls a permittee for two stormwater-related issues—illicit discharges and pollutants from construction sites, development projects, and municipal operations. This requirement in the renewal permit requires the permittee to be able to address such complaints and concerns from their citizens.

2. Recordkeeping

This is a new section of the permit. This section lists the records that must be maintained under this requirement. Permittees have the flexibility to keep all of the records in one location or database or have different locations and databases for different sections of the permit.

3. PDD

This is a new section of the permit. This section describes the type of information that needs to be in the PDD. As stated above, some permittees might choose to include and maintain all of the original documents in the PDD whereas other permittees might choose to simply list the applicable documents and where they can be found.

E. POLLUTANT RESTRICTIONS, PROHIBITIONS, AND REDUCTION REQUIREMENTS AND RECORDKEEPING

Section 61.2(26) of Regulation 61 states that "an effluent limitation is any restriction or prohibition established under this article or Federal law 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." In addition, Section 61.8(3)(r) of Regulation 61 requires that "the permit shall include best management practices to control or abate the discharge of pollutants when numeric effluent limitations are infeasible, when the practices are

reasonably necessary to achieve effluent limitations and standards, or when authorized under 304(e) of the federal act for control of toxic pollutants and hazardous substances."

Effluent limitations include "standards of performance", otherwise known as practice-based effluent limitations. Effluent limitations are typically expressed as practice-based limits or numeric limits. The renewal permit contains practice-based effluent limits and not numeric effluent limits.

One of the division's responsibilities under section 25-8-202(7)(b)(I) of the Colorado Water Quality Control Act (25-8-202(7)(b)(I)) states that "the division shall be solely responsible for the issuance and enforcement of permits authorizing point source discharges to surface waters of the state affected by such discharges." The division's responsibility is to ensure that permittees are implementing the requirements of the permit. Without numeric data, the division is left with ensuring that all practice-based effluent limits and control measures are being met.

The division has relocated the practice-based permit conditions that were previously under the CDPS Stormwater Management Program section to the Pollutant Restrictions, Prohibitions, and Reduction Requirements and Recordkeeping section of the renewal permit. The Pollutant Restrictions, Prohibitions, and Reduction Requirements and Recordkeeping s section of the permit is intended to provide clarity and transparency in permit requirements and increase efficiency in the implementation of the permittee's stormwater program. The previous permit required the permittee to develop a program and the division to review and approve the program prior to implementation. This framework was less transparent, resulted in highly variable implementation between permittees, caused uneven economic implications, and was not an efficient use of division staff time. The lack of clarity and transparency in the previous permit also was a cause to many of the findings in the audit reports. The new framework under this renewal permit will define and public notice the effluent limitations that permittees need to meet in order to achieve the MEP. Permittees will now have a greater flexibility to develop and refine PDDs (that still meet the effluent limitations in the renewal permit) and not have to request and receive approval from the division. It should be noted that the "stormwater management program and measureable goals modification" section in the previous permit are no longer needed and have been deleted from the renewal permit. The division will follow the "modification, suspension, revocation, or termination of permits by the division" section of the permit if the requirements in this permit need to be modified.

This section of the renewal permit defines the minimum requirements required to meet the federal and state regulatory requirement to control the discharge of pollutants to the MEP and effectively prohibit non-stormwater discharges. The recordkeeping and PDD sections are provided to identify most of the recordkeeping requirements associated with the effluent limitations in each program area of the permit. The permittee also will need to keep records under other sections of the renewal permit.

This section also incorporates by reference the Regulation 72 requirements for Public Education and Outreach.

The renewal permit also includes a Part III, which contains requirements applicable to specific permittees. This section currently addresses additional requirements for discharges subject to TMDL WLAs.

If a permittee determines that the MEP standards in this general permit are not appropriate, the permittee has the option to apply for an individual permit. It is also possible that, for some

permittees, the MEP requirements may need to contain additional flexibility for more effective or efficient practices. In such cases, the permittee may apply for coverage under an individual permit that includes determinations specific to their MS4. However, to allow for a more efficient approach when the renewal permit only needs minor revisions to requirements to address the needs of a community, the permittee may request a modification of this permit in accordance with Part II.B.5 of the renewal permit that identifies the requested permittee-specific terms and conditions. If determined appropriate, the division will modify the renewal permit to include the proposed MS4-specific terms and condition in Part III of the renewal permit, following the required provisions of Regulation 61.10, including public notice and comment. The division remains responsible for ensuring the proposed terms and conditions meet the statutory and regulatory framework and are appropriate for inclusion in a general permit, and may deny such modification request in accordance with the Regulation 61 or require the permittee to apply for an individual permit.

Recordkeeping
The recordkeeping sections clarify what records must be maintained and what information should be in the records. Recordkeeping requirements regarding regulatory mechanisms and regulatory mechanism exemptions include the actual codes, resolutions, ordinances, and program documents that permittees are using to implement the program. Whereas, the PDD is simply a list or citation of the codes, resolutions, ordinances, and program documents. Recordkeeping must also meet the requirements in Part I.K.2 of the renewal permit. Permittees must keep records to organize their stormwater program, enable their stormwater programs to be legally enforceable, and track that they have met the requirements of the permit.

1. Public Education and Outreach

   Section 61.8(11)(a)(ii)(A) of Regulation 61 states the "the permittee must implement a public education program to (I) distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff; and (II) inform businesses and the general public of impacts associated with illegal discharges and improper disposal of waste."

   The division has made extensive changes to this program area to include requirements in the renewal permit that define the expectations for the scope and scale of the education actions implemented by the permittee. This section provides the minimum standards for targeting information to businesses and the general public.. The permit allows for requirements to be met through collaboration, and the division highly recommends that stakeholders pursue options for a statewide education campaign.

   The renewal permit describes the minimum elements that must be addressed in the education and outreach activities. These elements include the distribution of educational materials that include information about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff, and inform businesses and the general public of impacts associated with illegal discharges and improper disposal of waste. Permittees can either incorporate all of these elements into each education and outreach activity or through a combination of a variety of activities. Permittees have the flexibility to conduct additional education and outreach activities.

   a. The following requirements apply:

i. Illicit Discharges: The renewal permit requires the permittee to identify at least one type of business that is likely to cause an illicit discharge or improperly dispose of waste that would result in pollutants in stormwater runoff. Although Section 61.8(11)(a)(ii)(A) of Regulation 61 states that permittees must inform businesses and the general public about the impacts associated with the "improper disposal of waste", permittees only have to conduct education and outreach activities concerning the improper disposal of waste that could result in stormwater impacts. The permittee must then develop at least one outreach activity for that type of business identified. The permittee can target more than one type of business, but the renewal permit minimum is one type of business.

ii. Education and Outreach Activities Table: The Education and Outreach Activities Table has been added to the renewal permit to allow permittees the flexibility to implement the activities that permittees determine are the most effective. Providing the activity table in the permit also allows permittees to make changes to their programs without submitting a program modification to the division and public noticing the change. The level of education and outreach required is consistent with what has been implemented by permittees in the previous permit term. The division has been implementing a process similar to what is identified in this section when reviewing permittee program descriptions for adequacy during previous permit terms. Permittees were unaware of the existence of the table or the ranking system that was used by the division. These requirements are now incorporated into the renewal permit. In addition, the division will no longer review program descriptions prior to issuing the permit certification.

The renewal permit is requiring that the permittee conduct four activities each year and two activities must be from the Active and Interactive Outreach column. In addition, the division noted during the audits that most permittees had two forms of passive outreach and two forms of active and interactive outreach. The most common passive outreach activities were fact sheets and a web site and the most common active and interactive outreach were an illicit discharge hotline and a household hazardous waste event.

iii. Nutrients: Section 85.5(4)(a) of Regulation 85 states that "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 and distribute educational materials or equivalent outreach to targeted sources (e.g., residential, industrial, agricultural, or commercial) that are contributing to, or have the potential to contribute, nutrients to the waters receiving the discharge authorized under the MS4 permit." In addition, section 85.5(4)(a) of Regulation 85 states that "CDPS Permits shall authorize MS4 permittees to meet the requirements 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)."

The division has added this section to the renewal permit in accordance with the requirements for permittees in Regulation 85. The division includes the phrase from Regulation 85, "education and outreach on stormwater impacts associated with nutrients," to clarify that outreach is required by the regulation and the renewal permit. "Outreach" is active and requires contact by the permittee and an exchange

of education and information. Making information available on a website without further action or outreach is passive education and does not meet the Regulation or the permit requirements. The division expects that the permittee will "reach out" to identified sources and provide information and education. Additionally, the permit includes the phrase "The Permittee must provide public education and outreach…" "Provide" is used in the renewal permit to clarify that permittees can use existing education and outreach materials and are not required to develop new materials. A collaborative education and outreach program is allowed in Regulation 85 and the renewal permit. The division encourages and recommends that permittees collaborate on the nutrient-related requirements in the renewal permit and has provided a timeframe in the compliance schedule that would allow such collaboration.

The division has purposely not provided a minimum list of targeted sources for permittees to address through education and outreach. The renewal permits include minor additions to what is in the regulation to provide transparent and measurable permit conditions. The division will assess this decision to not include a minimum number of targeted sources over the permit term by reviewing the nutrient education and outreach activities conducted by permittees and any permittee justification for not targeting specific sources. The division may provide minimum standards for targeted sources in a future renewal permit.

The statement of basis (85.15(X)) of Regulation 85 states that the "identification should include types of sources for which a reduction in nutrient discharges are likely to be obtained through education, and *prioritization* [emphasis added] of sources for implementation of the education program." The renewal permit allows the permittee to prioritize the targeted sources identified and to conduct outreach to those prioritized targeted sources. The permittee does not have to provide outreach to all of the identified targeted sources.

iv. Cherry Creek Reservoir Basin Discharges: Additional requirements are included in the Public Education and Outreach program area, as per the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72). In addition, the permit includes the language in the previous permit that incorporates the stormwater section of the regulation (72.7) by reference in the permit.

b. Recordkeeping

This is a new section of the permit. This section lists the records that must be maintained under this requirement.

c. PDD

This is a new section of the permit. This section describes the type of information that needs to be in the PDD. As stated above, some permittees might choose to include and maintain all of the original documents in the PDD whereas other permittees might choose to simply list the applicable documents and where they can be found.

2. Illicit Discharge Detection and Elimination (IDDE)

Section 61.8(11)(a)(ii)(C) of Regulation 61 states that "the permittee must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at 61.2) into the permittee's small MS4."

Stormwater discharges are different from illicit discharges. Stormwater discharges include all pollutants that stormwater picks up while flowing to the MS4. Illicit discharges are NOT from precipitation events. Illicit discharges are the addition of pollutants to the MS4 because of anthropogenic activities.

Illicit discharges are an important element of the scope of this permit and of the effluent limitations established. This permitting approach is unique to MS4 discharges and distinct from the approach taken for permitting other sources within the NPDES framework. The division has taken this approach following review of the language provided in the CWA and the legislative history associated with adoption of those provisions. The division has determined that Congress established these unique provisions regarding permitting discharges from MS4s in acknowledgement that: Not all discharges from an MS4 could be anticipated, characterized, and disclosed in a permit application; that not all non-stormwater discharges from an MS4 could be prohibited or eliminated; and that not all non-stormwater discharges into an MS4 pose significant environmental problems.

The division has interpreted the statutory requirement that the MS4 "effectively prohibit non-stormwater discharges" to be less than an outright prohibition of all non-stormwater discharges. This interpretation is consistent with state and federal regulations which include allowable non-stormwater contributions for MS4 discharges. Therefore, the statutory standard to reduce the discharge of pollutants to the MEP was applied by the division in determining effluent limitations for non-stormwater discharges, included in Part I.E.2 of the renewal permit. Discharges subject to effluent limitations requiring their prohibition, detection, and elimination are referred to in the permit as illicit discharges. Discharges not requiring their prohibition, detection, and elimination are referred to in the permit as being excluded from being considered an illicit discharge.

In developing these permit terms and conditions, the division has further defined categories of discharges and evaluated the extent to which control measures must be implemented to effectively prohibit the discharges:

- Illicit Discharges: Non-stormwater discharges for which the permit includes requirements for prohibition, detection, and elimination, unless the discharge to the MS4 is authorized by a separate CDPS or NPDES discharge permit or are discharges resulting from fire fighting activities. These are discharges for which there are established management practices and control techniques.

  Discharges excluded from being considered an illicit discharge under the permittee's IDDE program include the following—illicit discharges and discharges excluded from being considered an illicit discharge under the permittee's IDDE program.

- Stormwater discharges. The permit contains effluent limitations that set the MEP standard to restrict the quantities, rates, and concentrations of pollutants in stormwater discharges, but does not include requirements to prohibit unpermitted discharges for which separate permit coverage is required (i.e., stormwater discharges associated with industrial activity in accordance with Regulation 61).

- Regulatorily excluded: Discharges for which prohibition, detection, and elimination is not required because the discharge is exempt from the definition of a point source (i.e., irrigation return flow). This is specifically addressed in the permit because while this discharge is exempt from permit coverage, it is expected to be present in discharges from the MS4, and often commingled with other discharges for which effluent limitations have been established.

- Impracticability to prohibit: Discharges for which prohibition, detection, and elimination is not required because this level of control is deemed to be impracticable in most cases (e.g., emergency fire-fighting activities). In this case the division is relying on the discretion provided by Congress to allow the permitting authority to authorize the municipality to convey and discharge those discharges through the MS4.

- Unknown pollutant potential and/or practicability to control: Discharges for which prohibition, detection, and elimination has not been determined to meet the MEP standard. This includes discharges that have not been fully characterized in terms of their extent or pollutant levels. The permit includes a process for adding additional discharges to the exclusion from being considered illicit discharges, including appropriate division review and approval, and public notice procedures.

- Low pollution potential: Discharges for which prohibition, detection, and elimination is not required because control by the permittee is not currently deemed necessary to reduce the discharge of pollutants. In these cases, allowing for these discharges is still expected to result in protection of water quality standards. This includes discharges that meet the division's Low Risk Policy, such as discharges from snow melting and swimming pools.

Discharges from sources that are not considered illicit discharges may still be subject to other effluent limitations in Part I.E or Part III of the renewal permit to restrict or prohibit the quantities, rates, and concentrations of pollutants. Examples include stormwater discharges associated with construction activities, stormwater discharges associated with new development and redevelopment activities, stormwater discharges associated with municipal operations, and stormwater and non-stormwater discharges from target audiences in the public education and outreach program.

Most of this program concerns the permittee's response to reports/identification of illicit discharges in the MS4. Some portions of this program are proactive. For example, some of the general public and businesses will not improperly dispose of waste if the permittee has a regulatory mechanism prohibiting dumping. The division does not expect the permittee to proactively look for illicit discharges in the permit area or in the MS4. The division does, however, expect the permittee to respond to all reports of illicit discharges in the MS4 and identified by employees during their normal day-to-day activities.

When illicit discharges in the permit area but not to the MS4 are reported, the permittee is not required to respond to such reports under this permit. Most likely, other local codes, and federal and state laws and regulations will apply to such instances. Section 25-8-601(2) of the Colorado Water Quality Control Act has requirements for the division to be notified of suspected violations and accidental discharges. The section states the following:

> *Any person engaged in any operation or activity which results in a spill or discharge of oil or other substance which may cause pollution of the waters of the state contrary to the*

provisions of this article, as soon as he has knowledge thereof, shall notify the division of such discharge. Any person who fails to notify the division as soon as practicable is guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than ten thousand dollars, or by imprisonment in the county jail for not more than one year, or by both such fine and imprisonment.

The division has several documents regarding illegal dumping in Colorado. These documents apply to all areas of Colorado, whether inside or outside of the MS4 or permit area.

- *Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits*, CDPHE, March 1, 2008
- *Environmental Spill Reporting* brochure, CDPHE
- *Reporting Environmental Releases in Colorado,* CDPHE, January 2009

a. The following requirements apply:

i. Storm Sewer Map: Section 61.8(11)(a)(ii)(C)(I)(a) of Regulation 61 states that "the permittee must develop, if not already completed, a storm sewer system map, showing the location of all municipal storm sewer outfalls and the names and location of all state waters that receive discharges from those outfalls."

The requirements for this section have not changed from the previous permit.

ii. Regulatory Mechanism: Section 61.8(11)(a)(ii)(C)(I)(b) of Regulation 61 states that "the permittee must to the extent allowable under state or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the storm sewer system, and implement appropriate enforcement procedures and actions."

The renewal permit has the minimum elements to be addressed in the regulatory mechanism that effectively prohibits an illicit discharge. These minimum elements were identified by the division based upon compliance oversight activities. Twenty percent of the audited permittees allowed for an illicit discharge to continue for a certain timeframe without being considered in violation of the permittee's rules. This is not in compliance with Regulation 61. Upon discovery, permittees must prohibit non-stormwater discharges and implement appropriate enforcement procedures and actions.

The permittee's procedures and rules must result in an illicit discharge being subject to potential enforcement procedures for both the original finding of violation, as well as during any provided timeframe to eliminate the illicit discharge. Also, note that the permit does not require, and it is not the division's intent to imply through this summary, that the enforcement mechanism mandate or limit enforcement options to a per-day-of-violation monetary penalty calculation methodology.

Lastly, a review of permittee regulatory mechanisms also indicated that some regulatory mechanisms limited permittee access to sites with certain permits or zoning. This would have limited the permittee's ability to respond to potential illicit discharges. Therefore the renewal permit clarifies that they must have a procedure to

gain access to properties in the permittee's jurisdiction, unless restricted by state or local laws outside the permittee's control.

iii. Regulatory Mechanism Exemptions: The division added this section to address exceptions to the permittee's regulatory mechanism. Thirty percent of the audited permittees allowed an exemption, waiver, variance, or another type of discharge that did not have to be considered an illicit discharge. The division understands that exemptions, waivers and variances are a legal process in the permittee's code and ordinances and are relied on to address unforeseen circumstances without relying on revisions to regulatory mechanisms. The division has added a new requirement stating that exclusions, exemptions, waivers and variances must be implemented in a manner that complies with the permit. A process to add discharges to the list of discharges that do not need to be considered illicit discharges has been added to the renewal permit. See discussion of Part I.E.2.v. below.

iv. Tracing an Illicit Discharge: Section 61.8(11)(a)(ii)(C)(I)(c) of Regulation 61 states that "the permittee must develop and implement a plan to detect and address non-stormwater discharges, including illicit discharges and illegal dumping, to the system. The plan must include the following three components: procedures for locating priority areas likely to have illicit discharges; *procedures for tracing the source of an illicit discharge* [emphasis added]; and procedures for removing the source of the discharge."

The division has added new aspects to this existing requirement. The renewal permit includes a minimum standard for tracing an illicit discharge. The previous permit required the permittee to "develop, implement, and document a plan to detect and address non-stormwater discharges…" Some permittees were unclear whether they were required to make special trips outside of normal day-to-day activities to inspect their permit area to look for illicit discharges. The renewal permit states that this is not required. The division encourages permittees to actively look for illicit discharges, but this is not required under the permit. Permittees are, however, required to report and respond to illicit discharges observed during normal day-to-day activities. In addition, Part I.E.2.a.vii requires that applicable municipal staff be trained on recognizing and appropriately responding to illicit discharges observed during typical duties.

This section of the renewal permit also requires the permittee to have tools and written procedures to trace the source of reported illicit discharges. Common tools used for tracing an illicit discharge include storm sewer maps, dye tracers, cameras, and aerial maps. The permittee must select the tools that will be used and then have the tools available to trace an illicit discharge. Common procedures for tracing an illicit discharge include screening through visual inspections, opening manholes, using mobile cameras, using field tests of selected chemical parameters as indicators of discharge sources, and collecting and analyzing water samples.

Before responding to a report of an illicit discharge, the permittee must first determine the following:

- Is the source of the illicit discharge or the spilled material in the MS4? Under this permit, the permittee does not have to respond to reports of illicit discharges outside of the MS4. As stated above, under other federal, state, and

local laws, regulations, and codes, permittees must still respond to spills inside the permit area, but not in the MS4.

- Does the permittee consider the spilled material an illicit discharge? Under this permit, the permittee does not have to respond to discharges that are listed in Part I.E.2.a.v. and also listed in the permittee's ordinance.
- Are any other federal, state, or local law, regulations, or ordinances applicable to this illicit discharge? As stated above, permittees must still respond to spills under other federal, state, and local laws, regulations, and codes.

v. Discharges that could be Excluded from being Considered an Illicit Discharge: Section 61.8(11)(a)(ii)(C)(II) of Regulation 61 states that "the permittee needs to address the following categories of non-stormwater discharges or flows (i.e., illicit discharges) only if the permittee identifies them as significant contributors of pollutants to the permittee's small MS4: landscape irrigation, lawn watering, diverted stream flows, irrigation return flow, rising ground waters, uncontaminated ground water infiltration (as defined at 40 C.F.R. § 35.2005(20)), uncontaminated pumped ground water, springs, flows from riparian habitats and wetlands, water line flushing, discharges from potable water sources, foundation drains, air conditioning condensation, water from crawl space pumps, footing drains, individual residential car washing, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to state waters)."

As stated above, not all discharges from an MS4 could be anticipated, characterized, and disclosed in a permit application; that not all non-stormwater discharges from an MS4 could be prohibited or eliminated; and that not all non-stormwater discharges into an MS4 pose significant environmental problems. These types of discharges were called allowable non-stormwater discharges in the previous permit. Although many of the discharges listed in this section could be considered an illicit discharge, it is not MEP for permittees to have to detect and eliminate the discharges listed in this section.

. Permittees have the flexibility to exclude additional discharges from being considered an illicit discharge (see section (Y) In addition, permittees have the flexibility to consider the discharges listed in this section an illicit discharge if they determine that the discharge is a significant contributor of pollutants.

In addition, permittees may either reference each type of discharge in their regulatory mechanism or reference that the discharges are listed in the permit.

Changes were made to the list and process regarding discharges that are excluded from being considered an illicit discharge. These changes were made in response to new information available about specific types of discharges, including their potential pollutant levels and feasibility of control.

(A) *Landscape irrigation:* No changes to this discharge have been made.

(B) *Lawn watering:* No changes to this discharge have been made.

(C) *Diverted stream flows:* No changes to this discharge have been made.

(D) *Irrigation return flow:* No changes to this discharge have been made.

(E) *Rising ground waters:* No changes to this discharge have been made.

(F) *Uncontaminated ground water infiltration:*

1) The text from 40 C.F.R. § 35.205(2) has been added to the permit for clarity.

It is important to note that infiltration of stormwater is not considered "uncontaminated ground water infiltration." For example, stormwater runoff that is captured in structures or infiltrates and then is dewatered still meets the definition of stormwater. Therefore, where the source water for a dewatering activity is composed entirely of stormwater runoff, the requirement for the operator to obtain separate permit coverage is typically based on whether the point source discharge of stormwater is required to have permit coverage in accordance with Regulation 61.3(2) (i.e., is stormwater associated with industrial activities, which includes construction). If an industrial stormwater discharge permit certification is already held by a facility where dewatering is conducted, the dewatering discharge must be consistent with the terms and condition of the industrial stormwater permit.

Likewise, single family residential structure subterranean dewatering is presumed to be in direct response to precipitation events and composed entirely of stormwater (e.g., single family home sump pump discharges). However, some large residential structures such as multi-family complexes with underground parking structures where the dewatering discharge includes uncontaminated groundwater are covered under the COG603000 general permit.

(G) *Uncontaminated pumped groundwater:* The previous permit and section 61.8(a)(ii)(C)(II) of Regulation 61 listed "uncontaminated pumped groundwater."

Uncontaminated pumped groundwater can also include discharges of pumped groundwater that are not associated with potable water. For example, pumped groundwater may be covered under the *Stormwater Associated with Construction Activity* general permit (COR030000), *Discharges Associated with Subterranean Dewatering or Well Development* general permit (COG603000), the *Construction Dewatering Discharges* general permit (COG070000), or the *Remediation Activities Discharging to Surface Water* general permit (COG315000).

If pumped groundwater is covered under a CDPS permit and is discharged in compliance with the provisions of that permit, the discharge is assumed to be "uncontaminated." In addition, permittees may submit data, such as groundwater sampling results or data regarding sources of potential contamination, to support a claim that pumped groundwater is "uncontaminated."

Discharging stormwater comingled with surface and/or groundwater requires coverage under either COR030000 or the *Remediation Activities Discharging to Surface Water* general permit (COG315000). A dewatering discharge includes groundwater and is, therefore, not composed entirely of stormwater runoff when

the discharge is drawn from below a groundwater table, including as a result of seasonal or precipitation-driven increases in the groundwater table elevation. If stormwater is *not* comingled with surface and/or groundwater it may be discharged under the COR030000.

See Foundation Drains, Water from Crawl Space Pumps, and Footing Drains below.

(H) *Springs:* No changes to this discharge have been made.

(I) *Flows from riparian habitats and wetlands:* No changes to this discharge have been made.

(J) *Water line flushing:* The previous permit included "discharges from potable water sources," and "potable water line flushing." These sources are now addressed under the low risk guidance for potable water. Water line flushing could include discharges not covered under the potable water low risk guidance, however, the discharges that are not potable have increased pollutant potential and are addressed by the division's established permitting program for hydrostatic testing of pipelines that results in permit coverage being a practicable approach.

(K) *Discharges from potable water sources:* The previous permit and section 61.8(11)(a)(II)(C)(II) of Regulation 61 list discharges from potable sources. The renewal permit lists discharges from potable water source with a requirement that the discharge has to meet the division's Low Risk Discharge Guidance: Potable Water. The previous permit included "discharges from potable water sources," and "potable water line flushing." These sources are now addressed under the low risk guidance for potable water. Water line flushing could include discharges not covered under the potable water low risk guidance, however, the discharges that are not potable do have increased pollutant potential and are addressed by the division's established permitting program for hydrostatic testing of pipelines that results in permit coverage being a practicable approach.

1) The *Low Risk Discharge Guidance: Potable Water* lists conditions that must be met and the control measure that must be implemented. For example, the potable water shall not be used in any additional process, such as but not limited to, any type of washing, heat exchange, manufacturing, and hydrostatic testing of pipelines not associated with treated water distribution systems. Discharges of potable water DO NOT include discharges from power washing. Discharges from power washing are covered under the division's *Low Risk Discharge Guidance: Surface Cosmetic Power Washing Operations to Land*.

(L) *Foundation drains:* No changes to this discharge have been made. Permittees do not have to respond to reports of discharging foundation drains, (i.e., residential sump pumps) or respond to the discharge from a foundation drain as an illicit discharge under this permit.

(M) *Air conditioning condensation:* No changes to this discharge have been made.

(N) *Water from crawl space pumps:* No changes to this discharge have been made. Permittees do not have to respond to reports of discharges of water from crawl

space pumps (i.e., residential sump pumps) or respond to the discharge of water from a crawl space pump as an illicit discharge under this permit.

(O) *Footing drains:* No changes to this discharge have been made. Permittees do not have to respond to reports of discharging footing drains, (i.e., residential sump pumps) or respond to the discharge from a footing drain as an illicit discharge under this permit.

(P) *Individual residential car washing*: No changes to this discharge have been made.

(Q) *Dechlorinated swimming pool discharges in accordance with the Division's* Low Risk Discharge Guidance: Swimming Pools*:* No changes to this discharge have been made.

(R) *Water incidental to street sweeping:* No changes to this discharge have been made.

(S) *Dye testing in accordance with the manufacturers recommendations:* This discharge has been added to this section.

(T) *Stormwater runoff with incidental pollutants:* This discharge has been added to this section. Section 65.2(3) of Regulation 65 states that "the prohibition in section 65.2(1), above, does not apply to pollutants that are incidentally deposited and are mobilized by waters that only flow as a result of a storm event." This includes discharges of stormwater for which pollutants may be present. For example, stormwater runoff from surfaces for which anti-icing or deicing materials have been added remains stormwater runoff and is a source that does not have to be considered an illicit discharge. In this regulation the word "incidental" is key, as runoff into the storm sewer of deicer material is liable to happen as a consequence of applying deicer and fits with the definition of "incidental."

(U) *Discharges resulting from emergency fire fighting activities:* No changes to this discharge have been made.

(V) *Discharges authorized by a CDPS or NPDES permit:* No changes to this discharge have been made.

(W) *Irrigation return flow:* This discharge has been added to this section.

(X) *Discharges that are in accordance with the division's Low Risk Policy guidance documents and other division policies:*

Although some Low Risk Discharge Guidance policies are listed in other discharges, discharges that are in accordance with the division's Low Risk Policy guidance documents have been added to the renewal permit. As stated above, the division has intentionally not required permittees to prohibit, detect, and eliminate certain discharges that are covered by the division's current or future Low Risk Policy guidance documents. This allows the permittee to focus on discharges that have the greatest potential to cause water quality impacts. This will also promote transparency and consistency between permittees and the division in how these discharges are addressed on a day-to-day basis.

The division has developed the Low Risk Policy, WQP-27, to address discharges with the lowest potential risk to water quality and additional permit language to provide a mechanism for the permittee to assess the potential for certain discharges to contain pollutants. Discharges associated with snow melting, swimming pools, potable water, uncontaminated groundwater to land, and surface cosmetic power washing operations to land are currently addressed by guidance under the division's Low Risk Discharges.

In addition, a provision was added to the permit to allow for the permittee to incorporate new discharges covered by future division's low risk policy guidance documents into their list of discharges that are not considered illicit discharges. These discharges would be public noticed by the division during the development of new low risk policy guidance documents.

The division's initial concept was to eliminate this provision because it provides a method for permittees to allow a discharge that is not allowed by state law, is reasonable to prohibit, and/or has the potential to impact water quality. Additionally, the previous permit language lacks transparency since public notice is not required when exempting a discharge from prohibitions. Based on feedback, the division has revised the approach to incorporate requirements to address these concerns. The permit addresses providing for public notice and transparency regarding discharges and limiting allowed discharges to those with low risk of water quality impacts or for which prohibition is not practicable.

In addition, discharges in accordance with other division policies (CW5), such as the Guidance for Discharges Associated with Fire Suppression Systems, also do not have to be effectively prohibited by the permittee.

(Y) *Other discharges that the permittee will not treat as an illicit discharge and approved by the division:* The division has made substantial changes from the process in the previous permit for addressing occasional, incidental non-stormwater discharges. The division has improved transparency regarding these non stormwater discharges and has included more expectations and criteria for making determinations. There was a lack of clarity in division expectations in what non-stormwater discharges must be controlled and what constitutes adequate response and enforcement expectations. In the previous permit, the permittee could make a determination that a discharge is not reasonably expected to be a significant contributor of pollutants to the MS4. This process has been enhanced.

Thirty percent of audited permittees allowed additional discharges without prohibition, and it was not clear that an assessment of the potential for water quality impacts or the practicability of prohibition had occurred. Additionally, during review of the completed Targeted Permit Questionnaire, the division noted that the permit language and guidance provided in the previous permit was unclear and may have resulted in regulatory mechanisms that did not comply with the permit. For example, many permittees stated that their regulatory mechanism included the list of discharges that are not considered illicit discharges in the permit. However, upon review of the submitted documentation, there is a discrepancy between the discharges in the permit and the regulatory mechanism language. For example, the "residential car washing" discharge in the permit is not

the same as "non commercial vehicle washing," which appeared in some permittee regulatory mechanisms. Additionally, many permittees indicated in the questionnaire that their regulatory mechanism did not allow for or include occasional, incidental non-stormwater discharges. However the submitted code language included examples of occasional, incidental non-stormwater discharges such as: "Water not containing pollutants," "discharges necessary to protect public health and safety," and "discharges from ditches." The permittees did not provide supporting documentation or procedures for allowing these discharges. Some permittees stated in the questionnaire that they have developed a list of occasional, incidental non-stormwater discharges yet did not submit information or documentation that substantiates the occasional, incidental non-stormwater discharges, or stated that the determination is "case by case" without providing any information about the "case by case" decision-making process.

The division has identified that it is not MEP for permittees to detect and eliminate some discharges, in addition to those listed in the permit. Therefore, the renewal permit includes a process for permittees to incorporate new sources into the list of sources that do not have to be effectively prohibited. For discharges with low potential for pollution, the permit includes basic considerations and criteria for the evaluation. The criteria that the discharges with proper management are not expected to contain pollutants in concentrations that are toxic or in concentrations that would cause or contribute to a violation of a water quality standard is consistent with division practices for evaluating sources for coverage under the Low Risk Policy. The division also understands that some discharges may not be practicable to prohibit based on the absence of sufficient permitting options and existing discharge practices. The division understands that permittees have historically accepted certain discharges (e.g., charity car washes, discharges from fire suppression systems) and the division is uncertain about their impact to receiving water quality and their practicability to control. The renewal permit includes an option for discharges to be removed from being effectively prohibited without causing permittees to be in non-compliance over discharges in this category. The renewal permit requires public notification of non-stormwater discharges. The renewal permit provides a process and timeframe for submitting discharges that are identified both before and after the effective date of this permit. The permit also includes a process for the division to review the new sources. If the division denies the discharge, the permittee may prohibit the discharge, apply for a permit modification, or request a Low Risk Policy determination for a category of discharges not meeting the permit criteria to not be effectively prohibited.

Permittees' legal authority must reflect the types of discharges that will not detected or eliminated (effectively prohibited) in accordance with their Illicit Discharge Detection and Elimination program. Permittees may at any time determine that any of the discharges listed in this section are a significant source of pollutants and implement their illicit discharge response program. Again, permittees must update their regulatory mechanism to reflect the categories of non-stormwater discharges that will not trigger their illicit discharges response and enforcement program. Adding "and any other discharges that are determined following the procedures in the permit" to the regulatory mechanism would enable the permittee not to have to update their regulatory mechanism every time a new

type of discharge is added.

vi. Removing an Illicit Discharge: Section 61.8(11)(a)(ii)(C)(I)(c) of Regulation 61 states that "the permittee must develop and implement a plan to detect and address non-stormwater discharges, including illicit discharges and illegal dumping, to the system. The plan must include the following three components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; and *procedures for removing the source of the discharge* [emphasis added]."

The division has added new aspects to this existing requirement. The renewal permit includes a minimum standard and provides clarity for removing an illicit discharge to ensure that all permittees are meeting a minimum standard for illicit discharge response procedures.

This section of the permit requires the permittee to remove the source of the discharge. The division has clarified that the source of an illicit discharge is the source from which the illicit discharge originates and the spilled material, if feasible. As discussed above, this permit only requires the permittee to respond to illicit discharges in the MS4. The source must be stopped. However, the spilled material itself, if any portion of the source of the illicit discharge or the spilled material are in the MS4, must be cleaned up only if feasible.

The MS4 includes roads with drainage systems, curbs, and gutters. So, if an illicit discharge occurs in a curb and gutter or on a roadway with a drainage system, then the illicit discharge source needs to be removed. In addition, the associated material, both in and out of the MS4 and in the permitted area, needs to be removed, if feasible.

On the other hand, spills and dumped material outside of the MS4 but still in the permitted area do not have to be removed under this program, but need to be addressed under the division's *Reporting Environmental Releases in Colorado*.

vii. Enforcement Response: Section 61.8(11)(a)(ii)(C)(I)(b) of Regulation 61 states that "the permittee must to the extent allowable under state or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the storm sewer system, and *implement appropriate enforcement procedures and actions* [emphasis added]." Illicit discharges that are reported to the permittee and/or identified by staff during day-to-day normal work activities must be included in the enforcement response.

As stated above, 30 percent of the audited permittees did not have the legal authority to implement one or more enforcement mechanisms. In other words, their legal authority did not list one or more enforcement mechanisms used by staff. The permittee must determine all of the applicable informal, formal, and judicial enforcement mechanisms that will be used to enforce the IDDE program. The division is also clarifying that similar violations should be responded to in a uniform manner by the permittee and enforcement procedures should be transparent. The renewal permit does not pair violations with required responses. The permit requires that permittees address findings of a similar nature consistently.

Twenty percent of the audited permittees allowed for an illicit discharge to legally continue for a certain time period. This is not in compliance with Regulation 61.8(11)(ii)(C)(I)(b) which states "To the extent allowable under state or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into the storm sewer system, and implement appropriate enforcement procedures and actions." Permittees must prohibit illicit discharges and must have the ability to enforce against them immediately. This gives the permittee enforcement discretion to immediately enforce on a responsible party at any time. Permittees, however, can require the responsible party to immediately remove an illicit discharge and re-inspect at some later time. In addition, if the responsible party does not remove the illicit discharge, then the permittee can legally enforce on the responsible party and potentially assess a penalty starting from the date of the inspection.

viii. Priority Areas: Section 61.8(11)(a)(ii)(C)(I)(c) of Regulation 61 states that "the permittee must develop and implement a plan to detect and address non-stormwater discharges, including illicit discharges and illegal dumping, to the system. The plan must include the following three components: *procedures for locating priority areas likely to have illicit discharges* [emphasis added]; procedures for tracing the source of an illicit discharge; and procedures for removing the source of the discharge."

Locating priority areas is an important part of a stormwater program and specifically required by Regulation 61.

The concept of priority areas from the previous permit was incorporated into this section to provide information on the use of this tool. The division has added new aspects to an existing requirement by including a minimum standard to require that areas with a history of illegal dumping or past illicit discharges be determined to be priority areas. Compliance oversight activities conducted by the division indicated that permittees were inconsistent regarding the priority areas selection.

ix. Training: Section 61.8(11)(a)(ii)(C) of Regulation 61 states that "the permittee must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at 61.2) into the permittee's small MS4."

The division considers training those responsible for the identification and/or response to reports of illicit discharges part of "developing and implementing" an IDDE program.

b. Recordkeeping:

This is a new section of the permit. This section lists the records that must be maintained under this requirement.

Documenting Illicit Discharges and Responses: The division has added requirements for documenting incidents of illicit discharges to clarify the requirements for maintaining records. In addition, it has been required that a centralized recordkeeping of illicit discharge be maintained that allows permittees to identify repeat occurrences and identify priority areas. The second renewal permit allows several centralized recordkeeping systems by different departments, such as police and fire departments. Permittees should effectively communicate with all other departments and entities that

respond to illicit discharges in their permit area to ensure that the other departments and entities are responding to the illicit discharges in accordance with this renewal permit.

c. PDD

This is a new section of the permit. This section describes the type of information that needs to be in the PDD. As stated above, some permittees might choose to include and maintain all of the original documents in the PDD whereas other permittees might choose to simply list the applicable documents and where they can be found.

3. Construction Sites

Section 61.8(11)(a)(ii)(D)(I) of Regulation 61 states that "the permittee must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of pollutants in stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that **would disturb** [emphasis added] one acre or more. If the division waives requirements for stormwater discharges associated with a small construction activity in accordance with 61.3(2)(f)(ii)(B), the permittee is not required to develop, implement, and/or enforce its program to reduce pollutant discharges from such a site." Permittees should note that the requirement is for construction activities that result in a land disturbance of greater than or equal to one acre. Regulation 61 also uses the terms "would disturb." Since that section of the Regulation was written in March 2, 2001, construction activities that are part of a larger common plan of development or sale that disturbed one acre or more following March 2, 2001 and that have not been finally stabilized are covered under the applicable construction site definition.

The requirements of Regulation 72.7 apply to all construction activities within the Cherry Creek Reservoir basin, regardless of size and including activities in non urbanized, non growth areas. For projects within the Cherry Creek Reservoir basin that do not meet the definition of applicable construction activity or that are in non urbanized non growth areas, the permittee is required to meet the applicable requirements of Regulation 72.7 only; MEP based on Regulation 61 requirements do not apply in these areas. As specified in the general permit, permittees are not subject to the construction requirements in Part I.E.3. for these projects and that permittees are however, required to meet the requirements in the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72) 72.7.

For construction sites that disturb an acre or more, permittees are required to meet the most stringent requirements in both the general permit and the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72) 72.7, as specified in the general permit.

The division has made substantial changes to this program area to increase transparency of division expectations and clarify that the construction sites program must be proactive in ensuring that pollutants are reduced in any stormwater runoff flowing to the MS4.

Compliance oversight activities conducted by the division indicated that minimum standards were needed in the renewal permit for many reasons. The previous permit allowed the permittee flexibility to establish minimum standards. However, that was not an adequate method to minimize pollutants to the MS4 from construction activities to the MEP because the permit did not provide a minimum standard. Minimum standards varied across permittees, as

did the level to which pollutants were being controlled through effective practices. Because permittees could establish their own oversight procedures without set expectations in the permit, the economic burden of oversight varied greatly across permittees. For example, some permittees review all site plans, while others review a percentage or only certain types of site plans and not others. Some permittees inspect construction sites every 14 days and other permittees inspect construction sites 2-3 times a year or less. Compliance oversight activities also indicated that permittees were often not implementing the level of program oversight to which they committed in the 2008 program description documents. In practice, the procedures documented in permittee program description documents were not always followed or there was a discrepancy regarding what the permittee intended in the program description document and what the division interpreted from reviewing the description.

The division also has another general permit entitled Stormwater Discharges Associated with Construction Activity (COR030000), which share some similarities to the requirements in this permit. The requirements for the two permits are different in Regulation 61 and thus there are two different general permits that regulate stormwater on construction sites. Most of the requirements for the division administration of Stormwater Discharges Associated with Construction Activity general permit can be found in 61.4(3)(b) (Application Requirements for Stormwater Discharges Associated with Industrial Activity) and 61.6 (Issued Permits) and requirements for the administration of this permit can be found in 61.4(3)(c) (Application Requirements for Regulated Small Municipal Separate Storm Sewer Discharges) and 61.8(11) (Conditions for Phase II Municipal Stormwater Permits). In addition, other sections of Regulation 61 and other regulations apply to either and/or both general permits.

The current division general permit authorizing Stormwater Discharges Associated with Construction Activities (COR030000) contains minimum standards and the regulated industry and the public has indicated benefits from and preferences for this uniformity. Additionally, construction site operators have expressed to the division that the lack of clear minimum requirements in the MS4 permit creates confusion and an unlevel playing field among construction site operators across jurisdictions, and does not provide a minimum standard. Additionally, the previous permit allowed an economic advantage to permittees that did not implement an effective construction sites program that effectively required control measures for construction pollutant sources. The renewal permit contains minimum standards and creates a more level playing field among permittees and construction site operators.

The renewal permit applies to “applicable construction activities”, which is defined in the permit. Seventy percent of the audited permittees did not review site plans for all applicable construction projects. Some audited permittees had a variance for grading only projects, another audited permittee did not review site plans for public improvement projects, and another did not review projects that were less than one acre but were part of a larger common plan of development or sale of one acre or more. The permittee’s regulatory mechanism and standard operating procedures must ensure that the Construction Sites Program (from site plan review, to site inspection, to enforcement, etc.) will be implemented for *all* (public and private) applicable construction projects. In addition, the definitions for applicable construction activities and construction activity both state that routine maintenance is not considered an applicable construction activity. Permittees should note that maintenance activities regarding construction projects and control measure maintenance are different.

In addition, the renewal permit includes a definition of final stabilization. This definition was established in the division's March 3, 2013 memo. The following information is from the memo:

> *When vegetation is used to achieve final stabilization, the 70% vegetation requirement applies to a uniform plant density, which means that all areas of the site that rely on a vegetative cover to achieve stabilization must be uniformly vegetated.*
>
> *As provided in the bolded text above, the stormwater permit allows the permittee to use alternatives to vegetation to achieve final stabilization. All alternatives to vegetation must meet specific criteria to be considered equivalent to vegetation (see below). Permittees must ensure these criteria are met when planning for final stabilization in the Stormwater Management Plan (SWMP).*
>
> - *Stabilization must be permanent: All final stabilization methods, whether the permittee implements vegetation or an alternative to vegetation, must be permanent, and must be designed and implemented as such. Temporary measures, such as erosion control blankets that are designed to be removed or to degrade in place, are not permanent and cannot be used to meet the final stabilization requirements in the permit.*
> - *ALL disturbed areas must be stabilized: Final stabilization is achieved at a facility when all disturbed areas are stabilized. Stabilization alternatives must be implemented in all disturbed areas where the permittee will not utilize vegetation to meet the 70% vegetation requirement.*
> - *Alternatives must follow good practices: All stabilization practices must be selected, installed and implemented following good engineering, hydrologic and pollution control practices adequate to prevent pollution or degradation of State waters. Typically, industry-accepted criteria manuals that document the appropriate use of practices using selection criteria such as slope and slope length, soil type, flow conditions, pollutant sources, etc., will meet this standard. To help ensure that the alternate stabilization practices meet this standard, the Division recommends that a Licensed Professional Landscape Architect or other appropriately trained specialist design them. Further, the SWMP must include details specifying how any alternative stabilization practices will be installed and implemented in accordance with those good practices. For example, if landscape gravel cover is implemented, the permittee must rely on good landscaping design practices and specifications for permanent rock cover, including proper soil preparation, underlayment, slope limitation, etc. in accordance with the industry-accepted criteria used.*
>
> *Examples of practices that may be considered for alternative stabilization include:*
>
> - *Permanent Pavement and Buildings: Permanent impervious areas, including roofed buildings, asphalt, and concrete meet the alternative stabilization criteria as long as they are designed and implemented to minimize erosion and are permanent. Note that when permanent impervious areas are part of the overall site plan and not implemented for the purposes of stabilization, it is not necessary to provide specifications for their use in the SWMP. Temporary coverings such as tarps and shelters with roofs that allow precipitation or runoff to contact underlying soils are not considered permanent stabilization practices.*

- *Hardscape: May be used where the upper soil profile is not exposed and the materials, including underlayment as necessary, are appropriate for slopes and other conditions. Hardscape must be designed to minimize erosion, e.g. must prevent rill erosion. The SWMP must include the design details including the underlayment type and fasteners. An example of an installation that does not meet the criteria of good engineering practices is spreading rock on a site without determining the necessary depth and underlayment to prevent erosion of the underlying soils.*
- *Geogrid: A geosynthetic material mainly used to permanently reinforce soil by interlocking with the soil to improve stabilization. Geosynthetic material must be designed to minimize erosion, e.g. must prevent rill erosion. Applications include base stabilization in areas slow to vegetate, highly erosive soils, steepened slopes, and embankments constructed over weak soils. A wide variety of such materials are available, for example, products such as Turf Reinforcement Mat (TRM), which provides a permanent alternative to hard armor erosion protection, and can withstand prolonged exposure to UV light with negligible degradation.*
- *Xeriscape: Landscape design that minimizes water requirements must be designed and implemented in such a way that area(s) will not have rill or other erosion between plants, including such practices as providing cover with rocks and/or bark.*
- *Compacted and Stabilized Unpaved Driving Surfaces: Includes areas such as stabilized gravel roads and parking areas. Stabilized unpaved surfaces must follow good engineering practices for slopes, preventing concentrated flow, compaction, and surface cover appropriate for traffic, etc. The surface must be designed, graded, compacted and otherwise prepared in such a way as to minimize erosion, e.g. prevent rill erosion.*

The previous permit included procedures for modifying the program description document. These procedures have been deleted from the renewal permit. Instead, renewal permittees are authorized to modify their current program description document until the applicable date in the compliance schedule renewal permit.

Permittees have a compliance schedule in order to meet the requirements of the renewal permit. Permittees will continue to implement their program developed under the previous permit until the new program developed under the renewal permit is developed in accordance with the compliance schedule. Construction activities started under the previous permit must follow the requirements of the previous permit. Construction activities started under the previous permit include construction activities that have started the permittee's site plan approval or permitting or approval process. Simply adding a development to the land records is *not considered* a construction activity that has been started under the previous permit.

a. The following requirements apply:

i. Exclusions:
(A) *Construction Activities with R-Factor Waiver*: This requirement is similar in both the previous permit and the renewal permit.
(B) *Activities for County Growth Areas:* The division has determined that portions of the MS4 program must be implemented in high growth areas. Counties have

expressed positive comments on being able to determine said growth areas. The division has determined that some activities can be excluded from obtaining construction permits from the county in the growth area. The division will not allow this exclusion in non-growth areas. That has not been determined to meet the MEP standard.

1) Construction activities on sites that began as part of a plan of development prior to the effective date of this permit: Applicable construction activities in the growth area of a county that have started the site plan (as defined by this permit) review process, started construction, or finished construction under a previous permit and its associated requirements do not have to comply with the requirements in the renewal permit. Applicable construction activities or development that are only delineated on a land use map and have not started the site plan review process, started construction, or finished construction must comply with the requirements in this renewal permit, including the compliance schedule in Part I.H.

2) Large lot single family development: The requirements in this section of the renewal permit do not apply to construction activities for large lot single family development projects in the growth area of a county.

3) Agricultural facilities and structures on agricultural zoned lands: The requirements in this section of the renewal permit do not apply to construction activities for agricultural facilities and structures on agricultural zoned land in the growth area of a county.

4) Facilities associated with oil and gas exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be "construction activity": Stormwater discharges associated with construction activities in the growth area of a county directly related to oil and gas exploration, production, processing, and treatment operations or transmission facilities are regulated under the Colorado Discharge Permit System Regulations (5CCR 1002-61), and require coverage under this permit in accordance with that regulation. However, the requirements in this section of the renewal permit do not apply to stormwater discharges associated with these oil and gas related construction activities, to the extent that the references are limited by the federal Energy Policy Act of 2005.

ii. Regulatory Mechanism: Section 61.8(11)(a)(ii)(D)(II)(a) of Regulation 61 states that the program must include the development and implementation of "an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state or local law."

The division has added new aspects to this existing requirement by adding the minimum elements to be addressed in the regulatory mechanism. These minimum elements were identified by the division based on audit findings and reviewing the completed Targeted Permit Questionnaires. For example, some permittees stated that the regulatory mechanism requires pollutant control practices to "be implemented and maintained," yet the submitted code language for some permittees only requires controls to be maintained, but not implemented. Therefore, according to the example

code, the lack of pollutant control practices on a construction site is not automatically considered a violation by the permittee. For others, the submitted language requires erosion and sediment controls and not waste controls. The renewal permit specifies the elements that are required in the regulatory mechanism. Also, the permittee must ensure that their regulatory mechanisms are in compliance with this permit or are changed appropriately.

Permittees are advised that Regulation 61 specifically requires a regulatory mechanism for Illicit Discharges Detection and Elimination program [Section 61.8(11)(a)(ii)(C)(I)(b)] ***and*** the Construction Sites program [Section 61.8(11)(a)(ii)(D)(II)(a)]. Although the two programs can share the same regulatory mechanism, the permittee must ensure that the regulatory mechanism(s) contains the legal authority for the permittee to conduct all actions associated with the two programs. Some permittees have some actions in other parts of their regulatory mechanism, such as the right of entry. This is allowable, but permittees must document the applicable sections/parts of their regulatory mechanism that allows them the legal authority to conduct all activities under this program.

iii. Regulatory Mechanism Exemptions: The division added this section to address exceptions to the permittee's regulatory mechanism. Seventy percent of the audited permittees allowed some sort of exemption, waiver, or variance and therefore did not review site plans for all applicable construction projects. Regulation Section 61.8(11)(a)(ii)(D)(II)(a) does not allow any exemptions, waivers, or variances within the regulatory mechanism. Whether the project is a grading only project or public improvement project, all applicable construction projects are covered under this renewal permit.

The division understands that exemptions, waivers, and variances are a legal process in the permittee's regulatory mechanism under a variety of programs and are relied on to address unforeseen circumstances without relying on revisions to regulatory mechanisms. However, the division has added clarity that exclusions, exemptions, waivers, and variances cannot be implemented in a manner that violates Regulation 61.

iv. Control Measure Requirements: Section 61.8(11)(a)(ii)(D)(II) of Regulation 61 states that "the program must be developed and implemented to assure adequate design, implementation, and maintenance of BMPs at construction sites within the MS4 to reduce pollutant discharges and protect water quality." Section 61.8(11)(a)(ii)(D)(II)(b) of Regulation 61 states that the program must include the development and implementation of "requirements for construction site operators to implement appropriate erosion and sediment control BMPs." Section 61.8(11)(a)(ii)(D)(II)(c) of Regulation 61 states that the program must include the development and implementation of "requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality."

Volume 64, number 235, page 68758 of the Phase II Rule, EPA states:

> *Over a short period of time, storm water runoff from construction site activity can contribute more pollutants, including sediment, to a receiving stream than had been deposited over several decades (see section I.B.3). Storm water runoff*

from construction sites can include pollutants other than sediment, such as phosphorus and nitrogen, pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed.

Seventy percent of the audited permittees had at least one active construction site. For all of the audited permittees with an active construction site, division staff found inadequate control measures at one or more construction sites. In addition, at six of the seven audited permittees with active construction sites, division staff found at least one active construction site with control measures requiring maintenance. Inadequate sediment controls are a primary factor in construction site non-compliance. The division has determined that minimum requirements are needed and has provided minimum requirements for control measures for all construction sites. The previous permit had no minimum requirements for control measures.

Note that this section concerns construction sites and not illicit discharges. Refer to the previous section of the fact sheet for information concerning illicit discharges such as residential sump pumps.

This section has requirements to address the selection, installation, implementation, and maintenance of different types of control measures. The permittee is required to determine if the control measure is adequate and to develop design manuals and specifications (if applicable to the permittee). Some permittees have developed their own design manuals and specifications for control measures and other permittees allow site plans with design specifications from other approved sources. The renewal permit *does not* prescribe a specific control measure or the exact wording of design specifications. Permittees have the flexibility to ensure that the construction operator selects, installs, implements, and maintains control measures tailored to the specific construction site.

It is important for the permittee to ensure that applicable construction projects have appropriate control measures. Permittees must consider many factors when requiring construction operators to install control measures at an applicable construction site. Appropriate control measures should cover all of the phases of the construction project, treat all sources of pollutants at the construction site, address specific activities at the construction site, and be included on the site plan. Many of these requirements overlap the site plan requirement discussed below.

(A) Appropriate control measures must be implemented prior to the start of "construction activity" or phase, and continued through final stabilization. This section provides requirements for the timing of control measures. The timing of control measures is important in reducing pollutant discharges and protecting water quality. Permittees must ensure that construction operators select, install, implement, and maintain control measures prior to the start of construction through final stabilization. Some applicable construction projects will be short term and the same control measures might be able to be used (if installed and maintained properly) throughout the project duration. Other, longer term, applicable construction projects will need different control measures during the different phases of the project.

(B) Control Measures must be selected, designed, installed, implemented, and maintained to provide control for all potential pollutant sources associated with each construction activity to reduce pollutant discharges from the applicable construction site. Permittees should evaluate the applicable construction project's potential pollutant sources and ensure that the control measures are selected, installed, implemented, and maintained to reduce any discharges of pollutants, such as but not limited to sediment, construction site waste, trash, discarded building materials, concrete truck washout, chemicals, sanitary waste, and contaminated soils. This section lists the minimum activities that must be addressed by control measures. This section does not provide design specifications for control measures. The requirements of this section do not apply to control measures that evaporate, evapotranspirate, or infiltrate stormwater. These requirements apply to control measures that reduce pollutant discharges from the site.

In-stream control measures do not comply with this section of the permit. This section of Regulation 61 requires that pollutant discharges be reduced from the construction activities to the MS4. In other words, pollutants must be reduced from discharges from the applicable construction site *before* it is discharged to the MS4. In-stream facilities reduce pollutants *after* the discharge has entered a water of the state.

1) Land disturbance and storage of soils. Suspended sediment is a pollutant of concern for almost all construction projects. Control measures for suspended sediment need to be designed and installed to be appropriate for the expected flow rate, duration, and flow conditions (i.e., sheet or concentrated flow).

2) Vehicle tracking. Control measures must be implemented to minimize sediment being transported from disturbed areas to paved area from vehicle tracking, unless runoff from the paved area does not discharge or is directed to a control measure meeting Part I.E.1.a.iii(C)1), above (disturbed and stored soils).

3) Loading and unloading operations.

4) Outdoor storage of construction site materials, building materials, fertilizers, and chemicals.

5) Bulk storage of materials. Bulk storage for petroleum products and any other chemicals shall have secondary containment or equivalent protection to contain all spills and prevent any spilled materials from entering the MS4.

6) Vehicle and equipment maintenance and fueling.

7) Significant dust or particulate generating processes.

8) Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, and oils.

9) Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment. Many applicable construction projects involve the use of concrete. Some projects allow concrete truck, equipment, and tool washout on site and others do not. If concrete washout is determined

to be a pollutant of concern, the permittee must ensure that these activities do not result in the contribution of pollutants associated with the washing activity to stormwater runoff. Concrete washout water shall not be discharged to the MS4.

10) Dedicated asphalt and concrete batch plants.

11) Other areas or operations where spills can occur.

12) Other non-stormwater discharges including construction dewatering and wash water that may contribute pollutants to state waters.

(C) Control measures must be included on the approved site plan. Requirements for site plans are discussed below. Regulation 61 uses the term "site plan," which is the term used in the renewal permit. For clarity, the division compiled all of the suggested terms into a definition of a site plan.

v. Site Plans: Section 61.8(11)(a)(ii)(D)(II)(d) of Regulation 61 states that the program must include the development and implementation of "procedures for site plan review which incorporate consideration of potential water quality impacts."

The previous permit required the permittee to develop, implement, and document procedures for site plan review which incorporated consideration of water quality impacts. The previous permit did not provide any minimum requirements for the contents of a site plan or the permittee's site plan review process. This caused confusion amongst permittees and as stated above, 70 percent of the audited permittees did not review site plans for all applicable construction projects. Some audited permittees had a variance for grading-only projects, another audited permittee did not review site plans for public improvement projects, and another did not review projects that were less than one acre but were part of a larger common plan of development or sale.

A site plan is a control measure. The primary use of the site plan is by the construction operator. The site plan is a document that the construction operator and its staff can use to budget, purchase, locate, install, and maintain the control measures. The site plan is an important tool for all staff on the construction site and to help reduce pollutant discharges and protect water quality. Site plans can also be a useful tool during oversight or enforcement actions taken by the permittee on the construction operator. The site plan is also an important control measure for the permittee and the division to use during inspections and audits. Permittees do not have to verify that the site plan reflects current conditions during each inspection.

This section also requires that the site plan contain installation and implementation specifications or reference a document with installation and implementation specifications. Permittees have the flexibility to determine which documents with installation and implementation specifications are acceptable.

The division has made substantial changes to this section by clarifying minimum requirements for site plans and the permittee's site plan review. It should be noted that all applicable construction sites need site plans (also known as stormwater management plans) under the Stormwater Discharges Associated with Construction Activity general permit. This renewal permit does not prescribe the specific contents

of a site plan, but only requires that a site plan include the control measures that will be used and installation and implementation specifications for each control measure.

The division identified the lack of clarity as a basic gap in the permit that led to variability in the site plan review process and inadequate site plans being implemented. The lack of a minimum standard allowed an economic discrepancy between permittees and increased the potential for inadequate site plans to be implemented. Permittee feedback during oversight activities indicated that a field inspector may have little recourse to require correction of an inadequate site plan because of the permittee's internal processes. This renewal language provides a uniform minimum standard. The division has determined that reviewing all site plans is necessary for the permittee to have a program that is designed to prevent inadequate site plans from being implemented.

Some permittees require the same requirements in a site plan/stormwater management plan as the Stormwater Discharges Associated with Construction Activity general permit. Although this is allowable under this permit, permittees that have this requirement in their procedures should be advised that they must ensure that all elements of a site plan/stormwater management plan required under Stormwater Discharges Associated with Construction Activity general permit are present, which contains many more requirements than this renewal permit.

(A) *Renewal Permittees:* This section of the permit provides clarity to permittees to continue to implement their current PDDs (even if there is no "site plan" requirements or review) until an updated Construction Sites program has been developed in accordance with Part I.H.

(B) *Site Plan Requirement:* This section has been added to the renewal permit. The previous permit required the permittee to develop, implement, and enforce on a construction sites program that included "site plan review which incorporate consideration of potential water quality impacts." This section of the renewal permit provides more information on this requirement.

(C) *Initial Site Plan Review:* Site plan review is not just a paperwork exercise and is required by Regulation 61. As stated above, site plans are an important control measure and it helps the construction operator budget for the control measures that will be needed to comply with this renewal permit and helps the construction operator and staff locate, install, and maintain control measure to protect water quality.

This section of the renewal permit outlines the three items that permittees must include in their site plan review for applicable construction projects.

vi. Site Inspection: Section 61.8(11)(a)(ii)(D)(II)(f) of Regulation 61 states that the program must include the development and implementation of "procedures for *site inspection* [emphasis added] and enforcement of control measures."

The previous permit simply required that the permittee conduct site inspections and provided no minimum requirements for the inspections. As stated above, seventy percent of the audited permittees had at least one active construction site. Of those permittees with at least one active construction site, division staff found that 100

percent of the permittees had one or more construction sites with inadequate control measures. In addition, at six of the seven audited permittees with active construction sites, division staff found at least one active construction site with control measures requiring maintenance.

A review of the 2012 annual reports comparing the number of active construction sites and "full" inspections indicated that less than 10% of permittees conduct monthly inspections and approximately 25% of permittees currently conduct 9 or more inspections per year. Approximately 50% of permittees conduct inspections less frequent than quarterly. These numbers are based on all sites, including sites that may be inactive or temporarily stabilized.

Considering the existing rate of inspections and the high rate of inadequate control measures and inadequately maintained control measures at the active construction sites audited, the division added requirements to the site inspection section of the renewal permit.

Construction operators have to conduct site inspections in accordance with their permit coverage under the Stormwater Discharges Associated with Construction Activity general permit. These operator inspections *are not* considered site inspections under this renewal permit. Regulation 61 specifically requires that the permittee conduct site inspections and this permit clarifies the frequency and scope of the inspections.

Permittees should understand that they do not have the legal authority to conduct compliance assurance activities for the Stormwater Discharges Associated with Construction Activity general permit. The division conducts all compliance assurance activities associated with this statewide general permit. The permittee can, however, develop a regulatory mechanism to give them the legal authority and standard operating procedures to implement requirements similar to the Stormwater Discharges Associated with Construction Activity general permit.

Although the renewal permit lists the minimum inspection frequencies, permittees are responsible for reducing pollutant discharges from applicable construction sites to protect water quality. Permittees should note that in some cases, more frequent inspections will be required to ensure that adequate control measures are implemented.

(A) *Renewal Permittees:* The previous permit did not have specific requirements for site inspections. This section of the permit provides clarity to permittees to continue to implement their current PDDs (even if there is no site inspection frequency established) until an updated Construction Sites program has been developed in accordance with Part I.H.

(B) *Site Inspection Frequency Exclusion:* This section is a new section to the renewal permit to include several types of projects from the site inspection frequency. Some permittees permit individual homes within a housing development. Permittees will not have to inspect these individual homes if the permittee is inspecting the entire development. Inspection frequency exclusions are also allowed during winter conditions, which likely would only exist in high elevation portions of some permittee's permit area.

(C) *Routine Inspection:* This section contains the minimum requirements of a routine inspection. The minimum inspection requirements were developed based on the audited permittee results and the division's experience in inspecting construction sites under the Stormwater Discharges Associated with Construction Activity general permit.

Routine inspections must assess the control measures , the pollutant sources, and the discharge points of the applicable construction site. Regarding discharge points, Section 65.14 of Regulation 65 states that "The Commission affirms that the intent of Regulation 65 is to allow the division to make a finding of violation where a discharge enters a storm sewer inlet or pipe based on the premise that such discharge will reach state waters, either directly or as a result of a subsequent storm or other unrelated flow event." The permittee should, therefore, inspect the perimeter of the applicable construction sites as well as active stormwater inlets. Most likely, water quality has been or will be affected if there is a discharge of pollutants from a construction site.

(D) *Reduced Site Inspection*: The renewal permit allows for the inspection frequency to be reduced for inactive sites, sites within the Stormwater Management System Administrator's Program, staff vacancies, and indicator inspections. Permittees have the flexibility to not allow these reduced site inspections and require routine inspections for all applicable construction sites to reduce the discharge of pollutants and protect water quality.

Construction activity can be halted for a variety of reasons—construction operator company bankruptcy or financing issues, contractor scheduling conflicts, sale of the site from one contractor to another, etc. Most inactive construction sites are not stabilized and still need control measures and inspections. Therefore, the renewal permit includes reduced inspection frequency for sites where construction activity has been halted but not yet finally stabilized.

The permit also includes a reduction in frequency for construction activities operated by a participant in a division designated Stormwater Management System Administrator's Program to address statutory direction in accordance with Article 8 of title 25, Colorado Revised Statutes, and to recognize the high level of compliance observed by the division at participant sites.

Many permittees have limited staff for the inspection portion of this program and need more flexibility in the inspection frequency. The routine inspection frequency could be difficult to meet due to staff vacancies or temporary leave. The division anticipates that permittees will only use this exclusion once a year.

Indicator inspections are sometime called reconnaissance, drive-by, or screening inspections and if the permittee uses these types of inspections, will not have to conduct routine inspections every 45 days. Instead, the permittee will only have to do routine inspections every 90 days if they also conduct indicator inspections every 14 days.

(E) *Compliance Inspection:* This type of inspection addresses increased inspection frequencies in response to the permittee's determination of an inadequate control measure during another type of inspection. It should be noted that this inspection frequency does not apply to a permittee determination of a control measure requiring routine maintenance during another type of inspection. This is the only type of inspection that can be conducted by the construction operator and the operator must submit a report, including photographs, to the permittee.

vii. Enforcement Response: Section 61.8(11)(a)(ii)(D)(II)(f) of Regulation 61 states that the program must include the development and implementation of "procedures for site inspection and *enforcement* [emphasis added] of control measures."

The division has determined it is practicable and necessary for permittees to develop and implement an enforcement response program that allows escalated responses when necessary. The program must be able to obtain proactive compliance from chronic violators that repeatedly violate the construction sites program requirements. The program must also include sanctions adequate to obtain compliance from recalcitrant violators. All of these elements are essential to effectively requiring that controls be implemented. The previous permit allowed the permittee wide flexibility in developing and implementing procedures for enforcement of control measure. The permittee's enforcement response processes must convey that construction sites are expected to be in compliance and the permittee cannot allow a site to oscillate in and out of compliance without escalating enforcement.

Seventy percent of the audited permittees allowed construction operators a time period to correct the inadequate control measures and control measures requiring routine maintenance found during inspections without being in violation. This allows a timeframe for the applicable construction project to avoid implementing appropriate erosion and sediment control measure , reducing pollutant discharges, and protecting water quality as required by Regulation 61. The permittee has the flexibility to develop and implement procedures to escalate enforcement when it is determined that corrections to noncompliance are not made in a timely manner. The permittee, however, cannot provide a "grace period" from potential enforcement liability for the time period that it takes to correct inadequate control measures and control measures requiring routine maintenance. For example, the permittee can require the inadequate control measures or control measures requiring routine maintenance to be corrected immediately, and establish enforcement escalation criteria that allow timely returns to compliance to not be escalated to formal enforcement procedures.

Fifty percent of audited permittees allowed construction operators to chronically fail to implement adequate control measures and to fail to maintain control measures over the course of several permittee inspections of the site. For example, one permittee noted slope protection was needed for one portion of the site in 23 inspection reports over a 2 year period. The issue was never escalated. This section of the permit requires permittees to have processes and sanctions to minimize the occurrence of, and obtain compliance from, chronic and recalcitrant violators of control measure requirements.

(A) The permit does not pair violations with required responses. The renewal permit requires permittees to address findings of a similar nature in a consistent manner.

Permittees have the flexibility to determine how each finding or types of findings will be addressed.

(B) The renewal permit requires that enforcement procedures include information, formal, and judicial enforcement responses. The permittee has the flexibility to determine the difference in a "finding," "enforcement action," and "corrective action" or use other terms.

viii. Training: Section 61.8(11)(a)(ii)(D)(I) of Regulation 61 states that "the permittee must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre." In addition, section 61.8(11)(a)(ii)(D)(II)(b) of Regulation 61 states that the program must include the development and implementation of "requirements for construction site operators to implement appropriate erosion and sediment control BMPs."

The division has determined that providing information to construction operators is an important part of a transparent and successful construction sites program. The requirements have not changed from the previous permit. Permittees have flexibility on the format of the training, which can be information on the permittee's web site, a packet of information given to the construction operator, and/or a pre-construction meeting with permittee staff and the construction operator to explain the permittee's construction sites program and the construction operator's responsibilities.

ix. Cherry Creek Reservoir Basin Discharges: Additional requirements are included in the Construction program area, as per the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72). In addition, the permit includes the language in the previous permit that incorporates the stormwater section of the regulation (72.7) by reference in the permit.

x. For Applicable Construction Activities that Overlap Multiple Permit Areas: Section 61.1(1)(c) in Regulation 61 states "Nothing in these regulations shall be construed to limit a local government's authority to impose land-use or zoning requirements or other limitations on the activities subject to these regulations."

The division has expressly allowed co-regulating MS4 permittees to enter into an agreement for oversight of projects that overlap multiple permit areas. Stakeholder discussion indicated that projects that occur across multiple jurisdictions are subject to multiple inspection standards and requirements and place an unreasonable burden on construction contractors in meeting different standards and requirements for the same project. The example provided by stakeholders was the FasTracks transit project that passed through multiple permittee jurisdictions. Feedback indicated that the permittees and the construction industry wanted a mechanism in the permit that would allow co-regulating MS4 permittees to enter into agreements that would allow the project to adhere to one set of standards and requirements. The language in the renewal permit is intended to allow such arrangements between co-regulating MS4 permittees for overlapping projects as long as an agreement between the entities is in place for one or more MS4 permittees. The agreement must clearly identify the construction sites standards that will be applicable to the project and that each co-regulating MS4 permittee has the authority to inspect and enforce the selected

standards within its permit area to allow another permittee's construction sites standards to be implemented.

b. Recordkeeping

This is a new section of the permit. This section lists the records that must be maintained under this requirement.

Site Inspection: The division has added requirements for documenting oversight and response for construction activities to clarify the requirements under the previous permit for maintaining records. Minimum standards for inspection documentation have been added to the renewal permit.

The inspection documentation requirements are based on inspection documentation during compliance oversight activities conducted by the division between 2009 and 2012 and as part of the comprehensive overhaul of this program area. Division compliance activities indicated that documentation between different permittees and among staff within the same permittee was highly variable. It was difficult to confirm repeat violations, uncorrected violations, or a return to compliance when inspection forms did not reflect consistent extent of oversight. In some cases, the inspection form structurally allowed gaps in oversight because the form lacked appropriate prompts. For example, control measure categories were left off the form and therefore may not be reviewed by inspection staff, or the form lacked a prompt to indicate the condition of the control measure (adequate, in violation, missing, or in need of maintenance). In some cases, the status of control measures from multiple lots was noted on the same form, which created difficulty in tracking compliance on follow up inspections and was a barrier to enforcement for chronic and recalcitrant violators. The lack of minimum requirements for inspection documentation is a barrier to a compliant construction sites program and potential enforcement.

Permittees do not have to verify that the site conditions match the approved site plan during each inspection. Permittees may, however, choose to verify that the site conditions match the approved site plan during each inspection. Most permittees will need to cite how the site conditions did not match the approved site plan and thus resulted in environmental damage for a legally defensible enforcement action. In the division's enforcement experience, a well documented inspection leads to legally defensible enforcement actions.

c. PDD

This is a new section of the permit. This section describes the type of information that needs to be in the PDD. As stated above, some permittees might choose to include and maintain all of the original documents in the PDD whereas other permittees might choose to simply list the applicable documents and where they can be found.

4. Post-Construction Stormwater Management in New Development and Redevelopment

Section 61.8(11)(a)(ii)(E)(I) of Regulation 61 requires that "the permittee must develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge

into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts."

The Post-Construction Stormwater Management in New Development and Redevelopment program requires control measures after construction is completed to prevent or minimize water quality impacts associated with the long-term use of the areas that have undergone new development and redevelopment. Examples of control measures include permanent water quality ponds at housing developments, vegetated swales designed to increase infiltration and remove pollutants from runoff from new roads, minimizing impervious area or encouraging infiltration at new commercial developments, etc.

The requirements of Regulation 72.7 apply to all construction activities within the Cherry Creek Reservoir basin, regardless of size and including activities in non urbanized, non growth areas. For sites within the Cherry Creek Reservoir basin that do not meet the definition of applicable construction activity or that are in non urbanized non growth areas, the permittee is required to meet the applicable requirements of Regulation 72.7 only; MEP based on Regulation 61 requirements do not apply in these areas. As specified in the general permit, permittees are not subject to the construction requirements in Part I.E.3. for these projects and that permittees are however, required to meet the requirements in the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72) 72.7.

For construction sites that disturb an acre or more, permittees are required to meet the most stringent requirements in both the general permit and the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72) 72.7, as specified in the general permit.

Eighty percent of audited permittees failed to require post-construction control measures for all or portions of at least one development project of one acre or greater. Note, the previous permit allowed no exemptions to the requirements for a development project. Of those, only 20 percent of those audited permittees had adequate regulatory measures and standard operating procedures and the remaining audited permittees had findings related to an inadequate regulatory mechanism and/or standard operating procedure. Sixty percent of audited permittees had at least one post-construction control measure audited that was inadequate or needed maintenance. Fifty percent of audited permittees had at least one post-construction control measure that was not built in accordance with the approved site plan.

The root cause of the findings was often because the previous permit did not specify minimum standards for this program element and permittees implemented variable standards for post construction control measures. Similarly to the construction sites program, implementing different design standards and standard operating procedures for control measures is not leading to the prevention or minimization of water quality impacts as required by Regulation 61. In addition, inconsistent design standards and standard operating procedures created an uneven economic environment among permittees and property owners or land developers. Permittees that require a robust design standard (e.g., water quality capture volume-WQCV) and require the property owner to bear the cost to implement the design standard are at an economic disadvantage over those that have not required controls, or typically waive the requirements for controls for a variety of projects.

The audit findings have led the division to make significant changes to this program area in the renewal permit. The renewal permit defines and focuses on controls from applicable development projects instead of a narrow focus on impervious area, and this standard applies

to both pervious and impervious areas. In addition, the renewal permit offers the permittee the flexibility to exempt many types of applicable development projects from installing post-construction control measures. In many cases, however, pervious areas will not contribute flow during a water quality capture volume (WQCV) event and therefore not result in additional or expanded controls being needed.

Permittees should understand that this section of the permit reflects the Colorado Discharge Permit System (CDPS) program and not the TMDL program—two entirely different regulations and programs. Although, CDPS permits sometimes implement a TMDL (see Part III of this permit), this section reflects the CDPS program and Regulation 61. Flow is not listed as a pollutant in Part I.J. The permit and Regulation 61, however, are designed to reduce the discharge of pollutants from stormwater runoff.

In addition, permittees should also note that this CDPS permit is independent to water rights administered by the Division of Water Resources. Although the permit allows the retention, reuse, evopotranspiration, and evaporation of stormwater to prevent or minimize pollutants from stormwater, this permit in no way administers the water rights. Some permittees have allowed the retention or reuse of stormwater, but only after acquiring a water right through the Division of Water Resources. Permittees must comply with the Division of Water Resources before approving control measures that retain, reuse, or provide for infiltration, evapotranspiration, or evaporation of water. This process with the Division of Water Resources might require an augmentation plan and associated water right.

a. The following requirements apply:

i. Excluded Projects: The previous permit did not exclude any types of new development and redevelopment projects from post-construction control measure requirements. The division has added this section in the renewal permit to provide exclusions from coverage in the permittee's post construction program. Permittees should understand that the allowance of these exclusions for post-construction control measures could result in water quality impacts. Permittees are not required to allow these exclusions.

(A) *Pavement Management Projects:* The renewal permit includes terms and conditions that evolved from extensive discussion with permittees regarding permanent control measures for roadway projects, including pavement management and roadway redevelopment (discussed below). This broad based discussion originated from division compliance oversight activities which noted that several permittees did not consistently include post-construction control measures on roadway projects that involved existing roads. A key aspect of stakeholder concern involved the economics of adding post-construction control measures to address each roadway project because linear projects do not typically have access to land outside of the right-of-way for more cost effective control measures. Stakeholders provided narrative examples of projects where control measures could cost more than, or a substantial portion of, the roadway project and this cost would lead to fewer roadway and related roadway safety projects to be completed.

For example, Douglas County provided a memo to the division on August 30, 2013 titled Permanent Water Quality: 100% Water Quality Capture and Treatment Scenario. The memo "provides a summary of permanent water quality improvements for a hypothetical intersection reconstruction project located in

Douglas County. The design and costs included in this memorandum are based solely on the conceptual design that was completed at the request of Douglas County. The conceptual design was completed to develop comparative costs associated with various water quality infrastructure facilities." At issue is the cost to provide WQCV from new impervious areas from roadway projects. The conceptual design reviewed two scenarios for treatment. One scenario included treatment of other paved areas that were not part of the project, but were selected based on reduced cost of a similar cover type (pavement). The other scenario designed a treatment system that treated the new impervious roadway. The increased flexibility of trading areas to be treated allowed a much lower cost than a requirement to treat the new impervious area based on the conceptual project. In this renewal permit, a constrained site design standard is intended to provide for flexibility in these scenarios in lieu of specific conditions regarding trading redeveloped areas for existing developed areas. One reason a constrained site design standard was preferred over a trading concept is the difficulty in tracking existing developed areas relative to MS4 permit terms and requirements and variable timelines for when existing developed areas are redeveloped relative to making trading a permit requirement. The division has and continues to encourage permittees to go beyond the MEP standard established in this permit by implementing control measures for currently developed areas.

The division provided information to permittees on this topic via two memos dated March 14, 2011 and January 20, 2012. The January 20, 2012 memo stated that the division acknowledged that the permit lacked clarity regarding the requirements for permanent control measures for roadway redevelopment projects and the memo stated that the division intended to limit oversight of the post construction control measure requirements for the remainder of the permit term. The memo further described the limits of division oversight in this program area. The division has determined that there are project scenarios, which add impervious area to existing roadway, that are reasonable to exclude from the post-construction requirements. The exclusions were developed based on permittee discussion and feedback during the Water Quality Forum-MS4 work group meetings.

Stakeholder input expressed concern regarding activities related to pavement management and a desire for clear definitions of activities that are considered pavement management and will not require post-construction control measures. Stakeholder input also expressed a preference for allowing additional adjacent paved areas without a requirement for a permanent control measure. The division and stakeholders developed a draft framework through the Water Quality Forum-MS4 Issues workgroup. Many permittees are members of the MS4 Issues work group. The division has provided an exclusion of roadway redevelopment in the renewal permit. The exclusion provides a framework for adding impervious area without requiring a permanent water quality control measure. The division also excludes maintenance and pavement management activities by providing a definition of pavement management in the renewal permit.

(B) *Excluded Roadway Redevelopment:* Bike paths, paved shoulders, and turn lanes were specifically mentioned by stakeholders as projects that do not add capacity to the roadway but increase safety and should be allowed without triggering post-construction control measures. The renewal permit excludes (from post-construction control measures) the addition of 8.25 feet of new impervious area

to the width of an existing roadway. This size allows the desired adjacent safety pavement projects and was determined to add less than one acre of impervious area per mile of roadway. This is intended to mirror the regulatory standard for controls on projects exceeding one acre based on the assumption that the potential for water quality impacts on the receiving water and the practicability of control are reduced when projects are spread out over a long linear area.

(C) *Excluded Existing Roadway Areas:* The renewal permit also provides an exclusion from implementing post-construction control measures that address existing impervious areas for redevelopment of existing roadways as long as the project does not increase the width of the road by more than two times the original width or more, on average (e.g., two-lane road to a four-lane road). For example, a project that doubles the width of the road requires post-construction control measures for the new impervious area. This applies when a portion of a project is an existing roadway. Only the area of the existing roadway is excluded.

This exclusion is based on a determination that it may not be practicable for certain projects to essentially retrofit the existing portion of a project to be treated by the post-construction control measure. For projects not meeting this exclusion, substantial roadway reconstruction increases opportunities and the practicability for the installation of post-construction control measures.

(D) *Aboveground and Underground Utilities:* Stakeholder input expressed a preference for excluding aboveground and underground projects (e.g., underground utilities) that do not permanently alter the surface from the permanent water quality control measure requirements. The division has excluded activities for the installation or maintenance of aboveground and underground utilities if the activity does not permanently alter the terrain, ground cover, or drainage patterns of the site when compared to the conditions that existed prior to construction.

(E) *Large Lot Single Family Projects:* Infiltrating stormwater runoff can be an important tool in preventing or minimizing water quality impacts. Volume 64, number 235, page 68759 of the Phase II Rule states that

> *Reducing pollutant concentrations in storm water after the discharge enters a storm sewer system is often more expensive and less efficient than preventing or reducing pollutants at the source. Increased human activity associated with development often results in increased pollutant loading from storm water discharges.*

In addition, Volume 64, number 235, page 68760of the Phase II Rule also states

> *Minimizing directly connected impervious areas (DCIAs) is a drainage strategy that seeks to reduce paved areas and directs storm water runoff to landscaped areas or to structural controls such as grass swales or buffer strips. This strategy can slow the rate of runoff, reduce runoff volumes, attenuate peak flows, and encourage filtering and infiltration of storm water.*

Douglas County conducted a study on runoff from large lots in 2012. The study concluded that

Applying the infiltration field test results from the Orth property to large residential lots with imperviousness values up to 19 percent indicated that most, if not all, of the runoff would naturally infiltrate within the limits on the property. An impervious value of 20 percent was selected as a reasonable threshold for residential lots 2.5 acres and larger. Based on the evaluation conducted, the level of water quality treatment via natural infiltration and vegetative filtering on large residential lots with an imperviousness less than 20 percent appears comparable to or better than conventional treatment best management practices such as extended detention basins.

This renewal permit allows the permittee to exclude large-lot single family projects from installing permanent control measure if the lot imperviousness is less than 10 percent. Colorado has varied soil conditions, geology, and vegetation, so the division cannot apply the Douglas County study (20 percent imperviousness) statewide. The renewal permit allows the exclusion of up to a total lot imperviousness of 20 percent when a watershed-specific study shows that expected soil and vegetation conditions are suitable for infiltration/filtration of the WQCV for a typical site of greater than or equal to 2.5 acres. In addition, the permittee must accept the study as applicable within its MS4 boundaries. This exclusion does not apply to commercial or industrial development projects.

(F) *Non-Residential and Non-Commercial Infiltration Conditions:* As stated above, infiltrating stormwater runoff can be an important tool in preventing or minimizing water quality impacts. Similar to the Large Lot Single Family Projects exclusion, the Infiltration Conditions exclusion is applicable to development projects that use infiltration as the control measure , but does not include residential, commercial, or industrial development. No minimum lot sizes or total lot impervious area thresholds have been established for this exclusion because no studies in Colorado have been submitted to the division. The division foresees this exclusion to be applied to only a few types of development projects with large pervious areas, such as parks, and no areas of concentrated flows. Permittees should note that stream stabilization and trail projects are excluded below.

Similar to the Large Lot Single Family Projects exclusion, this exclusion does not remove the requirement for a permanent control measure. This exclusion is for development projects that do not need additional terms and conditions for oversight due to the nature of the infiltration control measure.

(G) *Projects with Land Disturbance to Undeveloped Land that will Remain Undeveloped:* This exclusion is similar to the large lot single family project and non-residential and non-commercial infiltration conditions projects in that use infiltration as the control measure.

(H) *Stream Stabilization Projects:* This exclusion is similar to the large lot single family project and non-residential and non-commercial infiltration conditions projects in that use infiltration as the control measure.

(I) *Trails:* This exclusion is similar to the large lot single family project and non-residential and non-commercial infiltration conditions projects in that use infiltration as the control measure.

(J) *Oil and Gas Exploration:* Due to the temporary nature of oil and gas exploration activities, permittees can exclude these types of projects from installing permanent control measures. Permittees should note that many oil and gas exploration activities will still need to meet the requirements in the Construction Sites section of the permit.

(K) *County Growth Areas:* As stated above, County growth areas are not urbanized areas, but are still in the permit area. This exclusion gives county permittees the flexibility to exclude requiring post-construction control measures for the listed types of applicable development projects in the growth areas only. County permittees must still require post-construction control measures in the urbanized areas of the permit area.

ii. Regulatory Mechanism: Section 61.8(11)(a)(ii)(E)(II)(b) of Regulation 61 requires that "the permittee must use an ordinance or other regulatory mechanism to address post construction runoff from new development and redevelopment projects to the extent allowable under state or local law."

Eighty percent of audited permittees had inadequate regulatory mechanisms and/or standard operating procedures. The division has added the minimum elements to be addressed in the regulatory mechanism. Local laws the permittee has authority to change will not be considered constraints.

All required control measures do not need to be located within the permittee's permit area. The permit requires mechanisms, such as an intergovernmental agreement (IGA) or memorandum of understanding (MOU), for control measures used to meet the requirements of this permit, but outside the jurisdictional control of the permittee. For example, if stormwater from a development project at the edge of one permittee's boundary will be treated by a control measure within another permittee's permit area, an IGA or MOU should be in place to clarify which permittee (or how each permittee) will fund and provide the applicable staff and equipment to perform any necessary maintenance.

iii. Regulatory Mechanism Exemptions: As stated above, 80 percent of audited permittees had inadequate regulatory mechanisms and/or standard operating procedures. Many of the audited permittees had waivers for types of projects, such as projects only involving grading, roadway projects, or public improvement projects. It should be noted that the previous permit did not allow for any exemptions, but the renewal permit allows for many types of exemptions.

The division added this section to address exceptions to the permittee's regulatory mechanism. The division understands that exemptions, waivers, and variances are often included in the permittee's code and ordinances can be relied upon to address unforeseen circumstances without relying on revisions to regulatory mechanisms. The division, however, has added clarity that exclusions, exemptions, waivers and variances cannot be implemented in a manner that creates a non-compliance with the renewal permit. In addition, the permittee must ensure that their standard operating procedures comply with the renewal permit.

iv. Control Measure Requirements: Section 61.8(11)(a)(ii)(E)(II)(a) of Regulation 61 requires that "the permittee must develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community."

Eighty percent of audited permittees failed to require permanent control measures at all or portions of at least one development project. The division noted variability in each permittee's design standard (if they had one) and how the design standard was applied. Several audited permittees stated in their program description document that Urban Drainage and Flood Control District (UDFCD) Volume 3 is used as a design manual. UDFCD Volume 3, however, is a guidance document and permittees were often not clear in their program documentation if the manual was considered optional guidance or if permittees had adopted only certain portion(s) of the manual (e.g., WQCV) as a regulatory standard. A lack of a clear design standards in the permit prevented some permittees from confirming that permanent control measures were included on site plans and that permanent control measures meeting a performance standard were installed. To address this significant and widespread finding, the renewal permit includes design standards for post-construction control measures.

EPA recently published a new document, *Post-Construction Performance Standards and Water Quality-Based Requirements: A Compendium of Permitting Approaches* states

> *Many states have developed performance and/or design standards to control post-construction stormwater discharges from newly developed and redeveloped sites. MS4 permits in 33 states have conditions implementing numeric performance standards.*

In addition, the document also states that

> *Many states have implemented numeric, retention-based performance standards for newly developed and redeveloped sites. These standards typically require or encourage using infiltration, evapotranspiration, or harvest practices to control a specified volume of stormwater. Volume retention is critical to reduce pollutant loads of all water quality parameters and to reduce erosion of the receiving waterbody. It also provides multiple community benefits by treating stormwater as a resource. Retention-based performance standards have been expressed in various ways. Some retention standards have been expressed as a volume of rainfall, a percentile storm event, or a ground water recharge volume that must be retained.*

Permittees identified a preference for the renewal permit to provide flexibility in the design standard that considers variability in site conditions. There are seven base design standards—water quality capture volume standard, pollutant removal standard, runoff reduction standard, applicable development project draining to a regional WQCV control measure, applicable development project draining to a regional WQCV facility, constrained redevelopment sites standard, and prior permit term standard. These options were developed based on review of existing manuals, EPA guidance, permittee discussion, and stakeholder input.

Permittees have the flexibility to require all *or* a combination of the seven base design standards. Permittees also have the flexibility to prohibit some of the seven standards.

Stakeholder input indicated a preference for the division to provide several design standard options, such as redeveloped sites, constrained sites, and regional control measures and facilities. The division recognizes that treatment must be tailored to the land development site and the renewal permit provides several options for post-construction requirements.

(A) *WQCV Standard:* WQCV is the volume equivalent to the runoff from an 80th percentile storm, meaning that 80 percent of the most frequently occurring storms are fully captured and treated and larger events are partially treated. Chapter 3 of Urban Storm Drainage Criteria Manual Volume 3 states that "water quality facilities for the Colorado Front Range are recommended to capture and treat the 80th percentile runoff event." The 80th percentile rainfall event represents a precipitation amount over 24 hours which 80 percent of all rainfall events for the period of record do not exceed. In other words, the 80th percentile rainfall event is defined as the measured precipitation depth accumulated over a 24-hour period and that is not exceeded in 80 percent of all events in an extended period. UDFCD states in Chapter 2 of Urban Storm Drainage Criteria Manual Volume 3 that capturing and treating precipitation from the 80th percentile event "should remove between 80 and 90%" of the annual TSS [total suspended solids] load, while doubling the capture volume was estimated to increase the removal rate by only 1%-2%."

Chapter 3 of UDFCD's Urban Storm Drainage Criteria Manual Volume 3 states that "WQCV is calculated as a function of imperviousness and BMP drain time." In addition, Chapter 3 states the following:

> *Figure 3-2, which illustrates the relationship between imperviousness and WQCV for various drain times, is appropriate for use in Colorado's high plains near the foothills. For other portions of Colorado or United states, the WQCV obtained from this figure can be adjusted using the following relationship.*

Chapter 2 of *Urban Storm Drainage Criteria Manual Volume 3* states that "the minimum recommended drain time for a post-construction BMP is 12 hours; however, this minimum value should only be used for BMPs that do not rely fully or partially on sedimentation for pollutant removal." The division expects that permittees will reference *Urban Storm Drainage Criteria Manual Volume 3* for equivalent design guidance for the recommended drain times for the specific control measure.

(B) *Pollutant Removal Standard:* As stated above, sediment is a typical pollutant from a construction site and other pollutants, such as some metals and phosphorus, can adsorb to sediment particles. The renewal permit requires that the control measure treat at a minimum the flow from a 80th percentile storm event. The most common control measures in this category are proprietary control measures. The percentage of sediment removal is typically specified by the manufacturer.

(C) *Runoff Reduction Standard:* As stated above, Volume 64, number 235, page 68760of the Phase II Rule states:

> *Minimizing directly connected impervious areas (DCIAs) is a drainage strategy that seeks to reduce paved areas and directs storm water runoff to landscaped*

areas or to structural controls such as grass swales or buffer strips. This strategy can slow the rate of runoff, reduce runoff volumes, attenuate peak flows, and encourage filtering and infiltration of storm water.

In addition, as stated above, *Post-Construction Performance Standards and Water Quality-Based Requirements: A Compendium of Permitting Approaches* states:

Many states have implemented numeric, retention-based performance standards for newly developed and redeveloped sites. These standards typically require or encourage using infiltration, evapotranspiration, or harvest practices to control a specified volume of stormwater. Volume retention is critical to reduce pollutant loads of all water quality parameters and to reduce erosion of the receiving waterbody. It also provides multiple community benefits by treating stormwater as a resource.

The U.S. Environmental Protection Agency defines green infrastructure as using "natural hydrologic features to manage water and provide environmental and community benefits." Green infrastructure refers to stormwater management systems that soak up and store stormwater and can include practices such as minimizing directly connected impervious areas and increasing urban tree canopy.

(D) *Applicable Development Project Draining to a Regional WQCV Control Measure :* Several permittees have portions of their permit area that drain to a regional WQCV control measure. The regional WQCV control measure can be used as the post-construction control measure for the applicable development project if the project drains directly to the regional WQCV control measure. Specifically, stormwater from the applicable development project cannot discharge to a water of the state before flowing to the regional WQCV control measure. This design standard is for a regional WQCV control measure and not a regional WQCV facility. Regional WQCV control measures are not located in-stream and regional WQCV facilities are located in-stream.

Volume 64, number 235, page 68759 of the Phase II rule states

In today's rule at § 122.34(b)(5), NPDES permits issued to an operator of a regulated small MS4 will require the operator to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that result in land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4."

That section also states "If an approach is chosen that primarily focuses on regional or non-structural BMPs, however, then the BMPs may be located away from the actual development site (e.g., a regional water quality pond)." Meaning, the control measure does not have to be on-site at the applicable development project, but can be located between the applicable development project and the discharge to waters of the state. The regional control measure has to be located before/prior to/in front of the discharge to a water of the state. The division interpreted "to the MS4" to mean the same as "from the MS4" in terms of this program.

If the permittee has an applicable development project that will meet this design standard and the WQCV control measure is located outside of the permittee's permit area, then the permittee has to ensure that the other permittee/entity will maintain the regional WQCV control measure. Having a formal agreement concerning the regional WQCV control measure is strongly recommended. In addition, the permittee cannot use this design standard if the regional WQCV control measure does not provide 100 percent WQCV treatment.

(E) *Applicable Development Project Draining to a Regional WQCV Facility:* Although an in-stream WQCV facility is not a control measure since it is located in the stream, the division recognizes that the facility provides water quality improvements. Regulation 61 requires that construction operators reduce the discharge of pollutants into the MS4. In-stream WQCV facilities treat the stream after the MS4 has discharged into the stream. The regional WQCV facility, therefore, cannot be considered a control measure and cannot alone be considered to meet the requirements of Regulation 61. In recognition of the value of the regional WQCV facilities, the division is reducing the onsite pollutant reduction design standard if the applicable development project is within the drainage area considered when designing the regional WQCV facility.

The division is aware of only three permittees using this design standard and has developed this design standard so that more permittees have the flexibility to incorporate this design standard into their program.

(F) *Constrained Redevelopment Sites Standard:* This section has been added because the division acknowledges that there are constrained sites under redevelopment and flexibility is needed. It is anticipated that the constrained site standards will be implemented on highly urban or densely developed sites lacking the open area to include post-construction control measures. For this reason, the renewal permit prohibits constrained sites standard to be applied on sites that are less than or equal to 75% impervious area. This standard does not apply to new applicable development projects.

The permittee has the flexibility to determine the standard operating procedures for determining practicability for this design standard. The procedures developed by the permittee shall be based on the applicable development project's inability to increase pervious surfaces on the project site.

Some stakeholders expressed an interest in trading post-construction controls throughout their permit area. This is not approved under this renewal permit. Instead, this permit allows reduced design standards for constrained applicable development projects. One reason a constrained site design standard was preferred over a trading concept is the difficulty in tracking existing developed areas relative to MS4 permit terms and requirements. Another reason is the variable timelines for when existing developed areas are redeveloped relative to making trading a permit requirement. Permittees must demonstrate through an engineering or hydrologic analysis that site constraints do not allow for the redevelopment to meet the WQCV standard, pollutant removal standard, or the runoff reduction standard.

Examples of the types of projects that will use the constrained redevelopment sites standard include significant redevelopment within the urban core, brown fields projects, and redevelopment projects that remove pollutant sources (such as existing surface parking lots) or reduce the need for new impervious surfaces (as compared to conventional or low-density new development) by incorporating higher densities and/or mixed land uses.

(G) *Previous Permit Term Standard:* The prior permit term standard allows for the continuation of the requirements from the previous permit terms. Permittees must ensure the long-term operation and maintenance of controls implemented in accordance with those permits. Permittees are not required to retrofit these existing controls to meet the new standards in the renewal permit. The prior permit term standard is also applicable to projects that have begun the permittee's site plan approval process. Since each permittee has a different site plan approval process, the permittee has the flexibility to document this process and implement this design standard accordingly.

v. Site Plans: Section 61.8(11)(a)(ii)(E)(II)(a) of Regulation 61 requires that "the permittee must develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community." In addition, section 61.8(11)(a)(ii)(E)(I) of Regulation 61 requires that "the permittee must develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts."

In addition, 40 percent of the audited permittees that had site plan review requirements failed to follow those requirements. Many had waivers for certain types of projects (grading and public projects), did not require the operation and maintenance manual as required by their SOP, and others adopted UDFCD's *Urban Storm Drainage Criteria Manual Volume 3* in its entirety, but failed to require the 4-step process in Chapter 1. Lastly, of the development projects that had installed post-construction control measures, 50 percent of the audited permittees had at least one control measure that did not conform to the approved site plan. To address these significant and widespread findings, the renewal permit includes requirements for site plan review. Similar to the Construction Sites Program, the term "site plan" is used in Regulation 61 and in this renewal permit. The other terms used for a "site plan" are included in the definitions section of the renewal permit.

The division has determined that reviewing all site plans is necessary in order for the permittee to ensure that adequate control measures that prevent or minimize water quality impacts are installed. Plan review is a basic oversight step that the permittee must implement to prevent inadequate site plans from being implemented. Additionally, the cost of permanent control measures and difficulty of correcting mistakes after the project is completed and the control measure installed warrant this minimum standard of oversight. The renewal permit includes requirements for site plans and site plan reviews for all applicable development projects.

The division has also added language regarding site plan modifications. This section regarding site plan modifications is different than the site plan requirements in the

Construction Sites program. The division understands that approved site plans may change during the course of construction or require modification to the operation and maintenance procedures during long-term operation and maintenance. The renewal permit allows the permittee to create a process for plan modifications and provides the minimum standards of modified plans or portions of plans to meet the same review standard as initial plans. The renewal permit also provides a requirement that plans must be modified before changes are implemented on the ground.

The division has only applied this requirement to newly implemented control measures after the deadline in Part I.H. At this time, the division has made the determination that it is not practicable to develop or modify plans for existing control measures. The division will evaluate the permittees' effectiveness at ensuring the long-term operation and maintenance of existing control measures in the absence of a requirement to modify plans for existing control measures. The division will then reevaluate this determination for the next permit term.

vi. Construction Inspection and Acceptance: Section 61.8(11)(a)(ii)(E)(II)(a) of Regulation 61 requires that the permittee must "develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community."

Fifty percent of audited permittees failed to ensure that the installed control measure conformed to the approved site plan. An important part of a successful structural control measure is inspections during construction and the permittee's acceptance that the control measure was built and installed per the approved site plan.

The previous permit required that the permittee develop, implement, and document procedures to determine that the control measures "are being installed according to specifications." The renewal permit requires that the permittee confirm that the "completed control measure meets the approved site plan in accordance with Part I.E.4.a.v." The permittee has the flexibility to develop procedures to ensure that this requirement is met using the terms that are applicable to their municipality.

The previous permit required confirmation that control measures had been installed. The permit, however, did not state the timeframe that permanent water quality control measures had to be operational after completion of a project or require an inspection prior to accepting the control measure. The renewal permit requires an inspection to confirm that the control measure was constructed in accordance with the approved site plan. The completed control measures must operate in accordance with the approved site plan.

The division also recognizes that some projects are completed in phases and that the control measure might be completed during a subsequent phase. The previous permit did not prevent or address the potential scenario of the control measure never being constructed or being delayed significantly if the subsequent project phases were abandoned or delayed. This scenario would create the potential for a completed phase of a new or redevelopment project without a control measure to prevent or minimize water quality impacts. The renewal permit allows temporary control measures, but they must still meet the design standards set in this section.

vii. Long-Term Operation and Maintenance and Post Acceptance Oversight: Section 61.8(11)(a)(ii)(E)(II)(c) of Regulation 61 requires that the permittee must "ensure adequate long-term operation and maintenance of BMPs."

The previous permit required that the permittee develop, implement, and document procedures to "ensure adequate long-term operation and maintenance" of control measures. Sixty percent of audited permittees had at least one post-construction control measure that was inadequate or needed maintenance. In addition, 80 percent of audited permittees did not install post-construction control measures for all or portions of one or more development project. Thirty percent of the audited permittees with a documented inspection schedule did not follow that schedule. Also, 50 percent of audited permittees had control measures installed that did not conform to the approved plan. Inadequate control measures or control measures needing maintenance do not prevent or minimize water quality impacts. From these audit results, the division determined that this section of the permit needed more clarification.

Although the previous permit required that the permittee develop and implement a long-term operation and maintenance program, the permit did not require field inspection at a minimum frequency nor did it include a minimum standard for inspection oversight. Minimum standards therefore varied across permittees. Some permittees committed to inspecting all permanent water quality control measures yearly, others committed to inspecting 10-20% of the permanent water quality control measures yearly and some permittees inspected the control measures every 5 or 10 years.

The previous permit did not foster a level economic environment among permittees. Because permittees could establish their own oversight procedures and frequency, the economic burden of oversight varied greatly across permittees. Permittees could meet the permit requirements with one inspection during the permit term and permittees that provided a more frequent inspection schedule and robust compliance program were at an economic disadvantage. The renewal permit establishes a minimum inspection frequency of once during the permit term for post-construction control measures, with one exception (discussed below). Permittees have the flexibility to inspect the control measures more often.

Stakeholders were concerned about requiring inspections of post-construction control measures on residential lots. Post-construction control measures on residential lots tend to be vegetative and include infiltration, such as grass buffers and swales. Stakeholders were concerned about the workload to inspect these widespread and numerous controls and expressed that adding an inspection burden on residential controls may reduce the use of these types of source control measures. Stakeholder input preferred allowing the existing land use regulations for inspection and enforcement of residential control measures. The division provided an exclusion from the minimum inspection frequency for post-construction control measures serving an individual residential lot.

All functional elements of control measures in the inspection requirement, include but are not limited to: drainage infrastructure, inlets, outlets, vegetation, filter media, etc. An alternative oversight process or post-construction control measures on an

individual residential site includes requiring annual certifications, responding to complaints, or other permittee-determined frequency.

viii. Enforcement Response: Section 61.8(11)(a)(ii)(E)(II)(c) of Regulation 61 requires that the permittee must "ensure adequate long-term operation and maintenance of BMPs." Enforcement is an important part of ensuring the long-term operation and maintenance of control measures. The previous permit required that the permittee "develop, implement, and document an enforcement program, which addresses appropriate response to common noncompliance issues, including those associated with both installation (subparagraph (3), above) and long-term operation and maintenance (subparagraph (4), above) of the required control measure." The previous permit allowed the permittee wide flexibility in developing and implementing procedures for enforcement of control measures.

As stated above, 60 percent of audited permittees had at least one permanent control measure that was inadequate or needed maintenance. The renewal permit adds more clarification to this requirement. Similar to other program areas, the division is not prescribing a specific enforcement response, but is requiring the permittee to develop and document the different types of common violations and the actions that will be taken to ensure that adequate post-control measures are installed, operated, and maintained to ensure that they prevent or minimize water quality impacts.

ix. Tracking: Section 61.8(11)(a)(ii)(E)(II)(c) of Regulation 61 requires that the permittee must "ensure adequate long-term operation and maintenance of BMPs." An important part of adequate long-term operation and maintenance is tracking each post-construction control measure. Tracking is especially important if the permittee uses the applicable development project draining to a regional WQCV facility or control measure design standards. These WQCV facilities and control measures must be tracked, inspected, and maintained to ensure that they are still preventing or minimizing water quality impacts as designed.

x. Training: Section 61.8(11)(a)(ii)(E)(I) of Regulation 61 requires that the permittee must "develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts." Training applicable permittee staff on implementing the applicable sections of the Post-Construction Stormwater Management in New Development and Redevelopment program is an important part of implementing a successful program. Permittees have the flexibility to design a training program tailored to their staff and municipality. Permittees can train applicable staff via one-on-one meetings, their web site, handouts, sending the staff to other helpful trainings, etc.

xi. Cherry Creek Reservoir Basin Discharges: Additional requirements are included in the Post-Construction program area, as per the Cherry Creek Reservoir Control Regulation (5 CCR 1002-72). In addition, the permit includes the language in the previous permit that incorporates the stormwater section of the regulation (72.7) continues to be incorporated by reference in the permit.

xii. For Applicable Development Projects that Overlap Multiple Permit Areas: Section 61.1(1)(c) in Regulation 61 states "Nothing in these regulations shall be construed to limit a local government's authority to impose land-use or zoning requirements or other limitations on the activities subject to these regulations."

The division is allowing co-regulating MS4 permittees to enter into an agreement for oversight of projects that overlap multiple permit areas. Stakeholder discussion indicated that projects that occur across multiple jurisdictions are subject to multiple inspection standards and requirements; and place an unreasonable burden on construction contractors in meeting different standards and requirements for the same project. The language in the renewal permit is intended to allow such arrangements between co-regulating MS4 permittees for overlapping projects as long as an agreement between the entities is in place for one or more MS4 permittees to allow another permittee's construction sites standards to be implemented. The renewal permit does not require any MS4 permittees to enter into such agreement.

Large MS4 permittees (Phase I MS4 permittees) are held to a different MEP standard and do not currently have post-construction exemptions in their permits. Phase I permittees (except CDOT) may not utilize the exemptions from Part I.E.4.a.i unless the applicable development project overlaps the permit area of a Phase II MS4 permittee. For example, the City and County of Denver (a Phase I MS4 permittee) can use the roadway exemption on an applicable development project when the project overlaps the permit area of both the City and County of Denver and a Phase II MS4 permittee. The Colorado Department of Transportation cannot use the roadway exemption to the post construction standards because its permit will have a different post-construction control measure framework.

If the permittee has an applicable development project that will meet the applicable development project draining to a regional WQCV facility or control measure design standards, and the WQCV facility or control measure is located outside of the permittee's permit area, then the permittee has to ensure that the other permittee will maintain the regional facility or control measure. Having a formal agreement concerning the WQCV facility is strongly recommended. In addition, the permittee cannot use it to meet the requirements in this permit if the regional WQCV facility does not meet the design standards in this renewal permit.

b. Recordkeeping:

This is a new section of the permit. This section lists the records that must be maintained under this requirement.

Excluded Projects: The previous permit did not list any exclusions, whereas, this renewal permit lists many types of exclusions that permittees can choose to use. The division has determined that the use of the exclusions must be closely tracked. In order for permittees to make use of the exclusions, they must have the resources to track and report the use of the exclusions. The use of the exclusions could result in a significant amount of developed area being excluded from being treated by control measures that would prevent or minimize water quality impacts. The permittee will need this information to demonstrate compliance to the division, EPA, or the public. The division will also need this information in future permit terms to evaluate the potential for water quality impacts and the practicability of additional requirements. Future options include incorporating

requirements for a permittee to implement controls to address discharges for which no controls are in place or anticipated based on redevelopment requirements to reduce pollutant discharges to the MS4 or the removal of one or more exclusions from future renewal permits.

Enforcement Response: The division has added requirements for documenting oversight and response for covered development projects to clarify the requirements under the previous permit for maintaining records. Audited permittees had varied inspection, documentation, and enforcement procedures, which resulted in 60 percent of audited permittees having at least one post-construction control measure that was inadequate or needed maintenance. For example, during oversight, the division noted that some permittees did not have an effective mechanism for noting deficiencies of the post-construction control measures and of following up on deficiencies. Most inspection documentation did not provide prompts to indicate if the post-construction control measure was initially constructed according to the approved plans or if the functional elements of the control measure were operating according to the approved plans. In one specific example, the division noted that the permittee limited the inspection to certain aspects of the control measure and did not note that the inlet to a structure was clogged thereby allowing stormwater to by-pass the structure. The renewal permit provides the minimum inspection documentation requirements in the corresponding recordkeeping section.

c. PDD

This is a new section of the permit. This section describes the type of information that needs to be in the PDD. As stated above, some permittees might choose to include and maintain all of the original documents in the PDD whereas other permittees might choose to simply list the applicable documents and where they can be found.

5. Pollution Prevention/Good Housekeeping for Municipal Operations

The renewal permit separates the requirements into regulated municipal facilities and applicable municipal operations. The renewal permit has different standards for facilities because permittees can develop plans for a municipal facility and facilities have fixed pollutant sources and can sometimes be constrained.

a. The following requirements apply:

i. Control Measure Requirements: Section 61.8(11)(a)(ii)(F)(l) of Regulation 61 requires that:

The permittee must develop and implement an operation and maintenance program that includes an employee training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must also inform public employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations. The program must prevent and/or reduce stormwater pollution from facilities such as streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations, and from activities such as park and open space maintenance, fleet and

building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable.

This requirement provides guidance for control measures implemented under the other parts of this section.

ii. Municipal Facility Runoff Control Measure: Section 61.8(11)(a)(ii)(F)(I) of Regulation 61 requires that:

The permittee must develop and implement an operation and maintenance program that includes an employee training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must also inform public employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations. The program must prevent and/or reduce stormwater pollution from facilities [emphasis added] *such as streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations, and from activities such as park and open space maintenance, fleet and building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable.*

(A) *Control Measures to prevent or reduce potential discharges of pollutants to the MS4 from the applicable municipal facilities:* The previous permit required that permittees "prevent and/or reduce stormwater pollution from facilities such as streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations, and from activities such as park and open space maintenance, fleet and building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable." Fifty percent of the audited permittees did not have secondary containment for large, primary containers, such as fuel, used fuel, used antifreeze, and liquid deicer (i.e., magnesium chloride). In addition, 80 percent of the audited permittees had a least one finding regarding an uncontrolled pollutant source with the potential to runoff at least one of the municipal yards. These significant findings led the division to revise this section to add new aspects to this existing requirement to provide the minimum requirements for municipal facilities that must be addressed by the permittee. For example, the renewal permit specifically includes, "solid-waste transfer stations where waste and recyclables are briefly held prior to further transport," whereas the previous permit included "outdoor storage areas" as a general category. This increased specificity is because the division intends for the permittee to examine each facility and ensure that control measures are appropriate for the specific facility. The division determined that the categories in the previous permit were too general and potentially created a scenario where activities would be combined and specific control measures could be overlooked or not documented in SOPs. This section of the permit does not require the permittee to create new municipal facility runoff control plans. Existing SOPs can be used to meet the requirements of this section, and modified if necessary, to address any requirements not previously addressed.

(B) *Categories of control measures as necessary to prevent or reduce the pollutant sources present:* The renewal permit specifies the minimum categories of control measures that must be implemented. This is to provide clarity that the permittee is not limited to certain solutions or management techniques to minimize pollutants.

Municipal facility inspection procedures: The renewal permit includes inspection procedures that are consistent with the current CDPS COR900000 industrial stormwater permit, with the exception of visual inspections. The division determined through compliance oversight activities and review of other permits and permit guidance, that an annual inspection is appropriate for municipal facilities. Minimum inspection procedures have been paired with minimum inspection documentation requirements in the corresponding recordkeeping section. The division considered a quarterly visual observation of stormwater discharges, which is in the COR900000 permit for Industrial Stormwater Discharges and in the Utah General Permit for MS4 discharges. The division decided not to include quarterly visual inspections in this renewal permit and may review this requirement in future permit terms.

iii. Municipal Operations and Maintenance Procedures: Section 61.8(11)(a)(ii)(F)(I) of Regulation 61 requires that:

The permittee must develop and implement an operation and maintenance program that includes an employee training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must also inform public employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations. The program must prevent and/or reduce stormwater pollution from facilities such as streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations, and from activities [emphasis added] *such as park and open space maintenance, fleet and building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable.*

The division has provided additional detail in the permit for this requirement. The division addressed this requirement in the previous permit by requiring a One-time Operating Procedures submittal that included the municipal operations that are now listed in the renewal permit. The renewal permit includes a requirement for control measures to minimize the discharge of pollutants associated with the removal of sediment, debris, trash, and other pollutant sources from the MS4. Operations may be grouped together by type, and procedures may be developed that address each group.

Additionally, the renewal permit includes a new requirement for control measures associated with removal of sediment, debris, trash, and other pollutant sources from the MS4. This requirement specifically originated with feedback to the division from operators seeking guidance on storing and disposing dredged material from post construction structures and the MS4 infrastructure.

iv. Nutrient Source reductions: Section 61.8(11)(a)(ii)(F)(I) of Regulation 61 requires that:

The permittee must develop and implement an operation and maintenance program that includes an employee training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must also inform public employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations. The program must prevent and/or reduce stormwater pollution from facilities such as streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations, and from activities such as park and open space maintenance, fleet and building maintenance, street maintenance, new construction of municipal facilities, and stormwater system maintenance, as applicable.

In addition, section 85.5(4)(b) of Regulation 85 requires permittees to:

Develop and implement 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.

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 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).

The division has added this section in accordance with the requirements for permittees in Regulation 85. The renewal permit requires permittees to identify the sources of nutrients. The renewal permit only requires the permittee to identify sources associated with fertilizer, although permittees have the flexibility to evaluate other non-fertilizer sources of nutrients. The division will review sources identified by the permittee and may modify this section in future permit terms as appropriate.

Regulation 85 allows permittees to participate in a collaborative program and apply the program in the permittee's jurisdiction. The division encourages and recommends that permittees collaborate on the nutrient-related requirements in the renewal permit and has provided a timeframe in the compliance schedule that would allow such collaboration.

v. Bulk Storage: This section includes requirements for outdoor bulk storage structures that are more than 55 gallons. This was not specifically required in the previous permit. The division has determined that requiring bulk storage in the permit is practicable based on the long-term inclusion of this requirement in stormwater discharge permits for industrial activities in Colorado. The division has determined that secondary containment for the outdoor storage of bulk storage structures that are more than 55 gallons of petroleum products and other chemicals is practicable

because many of the audited permittees were able to provide secondary containment for petroleum products and other chemicals. In addition, this is an existing requirement in industrial activities in division stormwater discharge permits. Bulk storage is defined in the permit and pertains to the primary source storage (i.e. containment to be drawn from or added to) of material. Bulk fuel storage or "silos" of magnesium chloride is an example of bulk storage. Electrical, operating, or manufacturing equipment, motive power containers, a tank of magnesium chloride on an application truck, and ancillary product piping, are not considered bulk storage.

Fifty percent of the audited permittees did not have secondary containment for large, outdoor, primary containers, such as fuel, used fuel, used antifreeze, and liquid deicer (i.e., magnesium chloride). The failure to implement controls for these pollutant sources was intended by the division to be a violation of the previous permit requirements; however lack of clarity resulted in this condition being prevalent. The containment in direct contact with the bulk material is the primary containment. Secondary containment is the back-up containment to the primary containment. The permit requires secondary containment or equivalent controls that are adequate to contain all spills and to prevent spilled material from entering state waters. Examples of secondary containment or equivalent controls include impervious bermed areas, double walled tanks, storage lockers and buildings with built in containment, discharges to a sump, and structural or non-structural control measures. A compliance schedule was added for the bulk storage requirements. Prior to the due date in the compliance schedule, the permittee remains responsible for complying with previous permit requirements for preventing or reducing pollutants in runoff from bulk storage containers.

vi. Training: Section 61.8(11)(a)(ii)(F)(I) of Regulation 61 requires that:

> *The permittee must develop and implement an operation and maintenance program that includes an* employee training component [emphasis added] *and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program must also inform public employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations.*

The previous permit required permittees to "develop and implement procedures to provide training to municipal employees as necessary to implement the program under Item 1, above." Since 80 percent of the audited permittees had at least one finding regarding an uncontrolled pollutant source with the potential for runoff from at least one of the municipal yards, the division has clarified the minimum training requirements in this section. The renewal permit includes a requirement to train employees that will conduct inspections.

b. Recordkeeping

This is a new section of the permit. This section lists the records that must be maintained under this requirement.

Stakeholder input included concern that revised requirements for municipal facility runoff control plans (MFRCP) would require permittees to duplicate previously completed information (e.g., standard operating procedures) into a new plan format. It is not the division's intent for the permittee to duplicate paperwork. Existing standard operating

procedures can be used to the meet this permit requirement. Some permittees may need to supplement additional documents to meet the new record keeping requirements.

Note that a record is required of the field condition where stormwater is discharged from the site. The division has added these requirements because the previous permit did not include minimum standards for inspection documentation. The division conducted oversight activities and noted documentation and follow up variation among permittees that hindered the effectiveness of the Pollution Prevention/Good Housekeeping for Municipal Operation program. The additional clarification and requirements of the municipal operations program warrant this minimum level of information on inspection documentation that is similar to the Illicit Discharge Detection and Elimination, Construction Sites, and Post Construction Stormwater Management in new Development and Redevelopment program areas.

c. PDD

This is a new section of the permit. This section describes the type of information that needs to be in the PDD. As stated above, some permittees might choose to include and maintain all of the original documents in the PDD whereas other permittees might choose to simply list the applicable documents and where they can be found.

F. OTHER TERMS AND CONDITIONS

The conditions for Resources and Special Provisions for Non-Standards MS4s have been deleted. The following identifies changes made from the previous permit.

1. General Limitations
   There are minor changes to this section from the previous permit. The prohibition of chemical additions is an important requirement of the permit. For example, chemical flocculants could be added to discharges from construction sites to cause sediment to settle. The chemical additives are considered a pollutant and are prohibited by this permit.

2. Releases in Excess of Reportable Quantities
   There are no changes to this section from the previous permit.

3. Records Availability
   There are minor changes to this section from the previous permit.

4. Discharges to Waters with Total Maximum Daily Loads (TMDLs)
   There are several changes to this section from the previous permit to streamline and clarify the requirements.

5. Implementation by Other Parties
   Section 61.8(11)(a)(vi) states that:

   A permittee may rely on another entity to satisfy its CDPS permit obligations to implement a minimum control measure, or component thereof, if:

   (A) The other entity, in fact, implements the control measure ;

(B) The particular control measure , or component thereof, is at least as stringent as the corresponding CDPS permit requirement; and

(C) The other entity agrees to implement the control measure on behalf of the permittee. In the reports that the permittee submits under subsection (viii)(C) of this section, it must also specify that the permittee relies on another entity to satisfy some of its permit obligations. The permittee remains responsible for compliance with its permit obligations if the other entity fails to implement the control measure (or component thereof).

Permittees may use another entity to implement part or all of the requirements in this permit and must meet the requirements of this section. Using another entity, including a participant in the storm water management system administrator program, does not reduce or transfer the responsibility of meeting all requirements in this permit from the permittee. The permittee is responsible for meeting all requirements in this permit.

A written acceptance between the parties is required and the other entity must be impartial. Most permittees have set procedures for such documents and the permittee must follow their procedures. The permittee has the flexibility to determine the criterion for a written acceptance.

The requirement in 25-8-803(2) of the Colorado Water Quality Control Act cannot be waived or removed. This section of the Colorado Water Quality Control Act allows permittees to be supported by storm water management system administrator program and does not waive the requirements of Part I.F.5. of the permit. In fact, this section of the Colorado Water Quality Control Act requires one further activity in addition to the requirements of Part I.F.5. of the permit—the permittee must implement procedures to demonstrate and report to the division that the administrator's program is meeting the requirements for third party audits. The division has made this a requirement for all permittees using another party to implement a portion of their entire stormwater program. These procedures must be available upon request from the division.

Section 25-8-803 of the Colorado Water Quality Control Act states:

(1) MS4 permittees may choose to work with any administrator to assist the MS4 permittee in complying with the terms and conditions for the MS4 permittee's CDPS MS4 permit. An MS4 permittee may utilize all, or portions of, the storm water management system administrator's program as part of the MS4 permittee's program for oversight of construction sites to demonstrate compliance with the requirements of the MS4 permittee's CDPS permit for storm water discharges associated with an MS4.

(2) The division may consider third-party audits conducted pursuant to a stormwater management system administrator's program to be part of the MS4 permittee's compliance oversight program required by its CDPS MS4 permit if the MS4 permittee formally utilizes the storm water management system administrator's program that conducted the audit, and the MS4 permittee implements procedures to demonstrate and report to the division, upon division request, that the administrator's program is meeting the requirements for third-party audits in section 25-8-802(1) and (3) for participant construction activities located within the jurisdiction of the MS4 permittee.

(3) An MS4 permittee may reduce compliance oversight activities for facilities authorized to discharge under a CDPS storm water construction permit that are operated by participants in a storm water management system administrator's program based on a determination by the MS4 permittee that the participants or participant facilities have a demonstrated record of reduced potential for occurrences of noncompliance and reduced risk of negative impacts on receiving waters. This part 8 does not prohibit or restrict any compliance oversight, including inspections, by an MS4 permittee.

(4) Modification of the MS4 permittee's program is subject to division approval in accordance with the requirements of the applicable CDPS MS4 permit.

(5) An MS4 permittee's use of a storm water management system administrator's program is strictly voluntary, and an MS4 permittee may end its use of the program at any time upon written notice to the administrator.

(6) Nothing in this part 8 grants regulatory authority to a storm water management system administrator or the authority to impose any fine.

(7) Nothing in this part 8 preempts or supersedes any authority of an MS4 permittee or any other local agency.

(8) Nothing in this part 8 removes, reduces or transfers the responsibility for compliance with an MS4 permit from the MS4 permittee.

6. Monitoring

Regulation 61.8(4) states that "any discharge authorized by a discharge permit may be subject to such monitoring, record-keeping, and reporting requirements as may be reasonably required in writing by the division." It is the division's standard practice to include monitoring requirements for discharges to segments on the 303(d) List of Water-Quality-Limited Segments Requiring TMDLs when the discharge may contribute to the impairment for that segment. This facilitates having information available to characterize loads as part of development of a TMDL. The division has evaluated and included requirements in the renewal permit consistent with this practice, as discussed below.

Following the pre-public notice meeting, the division requested that permittees complete a voluntary survey regarding storm sewer outfall mapping and monitoring. Approximately half of the COR090000 and COR080000 permittees submitted a completed survey. All respondents indicated that the required mapping storm sewer activity was completed. Approximately half of the respondents indicated that they were conducting dry weather outfall screening, which is not required by the previous permit, and did not have an economic barrier from continuing some level of dry weather outfall screening. Additionally, approximately half of the respondents indicated that they know how many outfalls that discharge to segments impaired for *E. coli* and selenium. Permittees identified a range of outfalls from 0 to 193, with approximately half of those respondents having fewer than 30 outfalls that discharge to segments impaired for *E. coli* and selenium. Approximately 25 percent of respondents knew or had an estimate of how many outfalls into segments impaired for *E. coli* and selenium had dry weather flows; and approximately 25 percent of respondents have outfall monitoring data for *E. coli* and/or selenium.

The review of impaired segments for which a TMDL has not been completed led the division to consider additional terms and conditions related to monitoring discharges from MS4s in order

to characterize pollutant levels in the discharge for the purpose of generating information to develop TMDLs. The division initially considered including monitoring requirements in the draft permit for *E. coli*, selenium, and arsenic. The division eliminated arsenic from further consideration in this permit term due to uncertainty regarding the statewide standard and in particular the technologically feasible level. The division discussed the concept of monitoring requirements for *E. coli* and selenium extensively in the stakeholder process conducted in advance of preparing draft permit documents. Based on the input received, the division decided to include monitoring option 1 in the renewal permit.

The division considered both wet and dry weather monitoring options and decided to focus on dry weather for this permit term. At this time, pollutants that are known contributors to water quality impairment expected to be contributed primarily through wet weather discharges, such as nutrients, are expected to be characterized through the requirements contained in Regulation 85 and controlled through the practice-based controls in the five program areas of the permit.

The permit includes the language in the previous permit that allows the division the option of addressing monitoring on an individual permittee case-by-case basis. With this requirement, the division may include monitoring in individual permittee certifications as reasonably required.

7. General Monitoring and Sampling Requirements
   This section has been added and is paired with the monitoring requirements that have been added in the renewal permit.

G. PROGRAM REVIEW AND MODIFICATION

This section has been substantially edited. The requirements related to division Review of Programs and Reports and Demonstration of Adequacy in the previous permit have been removed and the aspects of program review and approval is now limited to the Annual Program Review conducted by the permittee.

Permittees no longer have to submit any information to the division when they modify their PDD. Permittees can modify their PDD anytime. Permittees must ensure that all modifications comply with all permit requirements. Part I.E.1, 2, and 3 from the previous permit have been removed since they are not applicable to this renewal permit. Minor edits have been made to Part I.E.4 in the previous permit. In this section, permittees had to conduct an analysis or assessment and Part I.1 and Part I.F of the previous permit required permittees to submit an annual report of the analysis or assessment. Annual reporting requirements are in Part I.I of the renewal permit.

H. COMPLIANCE SCHEDULE

Renewal permittees have to implement their current programs until they have developed a new program in compliance with this renewal permit or the compliance schedule deadline, whichever is sooner.

The previous permit did not have a compliance schedule. All newer permits issued by the division list specific dates as the compliance schedule deadline. Compliance schedules are provided in the permit for renewal permittees and new permittees. This replaces the process of relying on guidance, program submittals, and separate public notice when establishing deadlines, consistent

with the approach for establishing effluent limitations. Compliance schedule dates are included in a separate table to address different dates for new and renewal permittees.

This section has been added to the renewal permit. The Clean Water Act (40 C.F.R. § 122.34(a)) and Regulation 61.8 (11)(a)(i) require development and implementation of the permittee's CDPS Stormwater Management Program as required by the permit in accordance with the specific date in the compliance schedule tables. Many of the permit requirements are not effective immediately. A compliance schedule consolidates the information regarding the compliance dates for permit requirements.

Compliance dates are not provided in the specific permit section, unless the compliance date is the same for new and renewal permittees. There are different compliance schedules for new and renewal permittees because the due dates are typically different with new permittees receiving more time to complete the permit requirements. This reflects the time for new permittees to become permitted the first year. In many instances, a compliance schedule item for new permittees reflects an expansion of current program requirements and is not a completely new requirement. The compliance schedule only requires notification in the next annual report that a requirement has been completed and does not require the submittal of reports. The renewal permit includes an extra column titled "ICIS Codes" so that compliance elements can be internally coordinated better with the EPA's Integrated Compliance Information System (ICIS) reporting.

I. REPORTING REQUIREMENTS

Section 61.8(11)(a)(vii)(A) of Regulation 61 requires that "the permittee must evaluate program compliance, the appropriateness of its identified BMPs, and progress towards achieving its identified measurable goals. A summary of this evaluation shall be included in the permittee's annual report."

Permittees should note that 25-8-802 in the Water Quality Control Act deals with the Stormwater Management System Administrator Program and not with Phase II MS4 permits in Regulation 61.

Reporting requirements were revised to address new terms and conditions and to include a requirement for an annual certification by the permittee. The division intends to continue to provide an annual report form. The intent of the annual report is to provide a representative summary to the division that allows the division to gain a basic understanding of the permittee's program status and implementation. The annual report also includes requirements to provide basic quantities of certain elements (e.g., number of construction sites and inspections) that allow the division to gain insight on the scope and scale of a program area. The division has attempted to limit the basic reporting items and includes a focus on any exceptions or exclusions implemented by the permittee. For example, the annual report requires the permittee to provide information on the applicable development projects that were excluded from being required to install a post-construction control measure. If the permittee does not implement the mechanisms in the permit that allows the exclusion, then the permit has a reduced reporting requirement. The annual report items are expected to be reported based on when the program area is required in the compliance schedule. Prior annual reports do not have to include the status of this activity and the updated PDD does not have to be submitted to the division, unless requested.

J. DEFINITIONS

Many definitions have been added to the renewal permit to increase clarity about the intent of terms in the context of the permit and align with new permit language.

K. **GENERAL REQUIREMENTS**

1. Signatory Requirements
   Section 61.4(1) of Regulation 61 lists the signatory requirements. This section has been modified to reflect the requirements in Regulation 61. The previous permit did not include the complete language in Regulation 61, which resulted in unclear expectations regarding the signatory authority and duly authorized representative. Division compliance oversight activities noted that the legal contact or duly authorized representative may not have the proper authority in the organization to sign reports submitted to the division. The duly authorized representative is required to have responsibility for the overall operation of the regulated facility, yet some permittee's organizational chart showed that the legal contact did not have responsibility for the overall operation of the regulated facility. For example, a permittee may have designated the Public Works Director to be the legal contact or duly authorized representative, however, the Public Works Director may not have authority over the Planning Director under whose oversight, construction plans are reviewed and approved. The division expects that in most instances, the legal contact or duly authorized representative will be an elected official or the City/County Manager.

2. Retention of Records
   This section has been updated to reflect changes in required recordkeeping and program description documentation. Section 61.8(11)(a)(vii)(B) of Regulation 61 requires that

   The permittee must keep records required by the permit for at least three (3) years. The permittee must submit their records to the division only when specifically asked to do so. The permittee must make the records, including a description of the permittee's stormwater management program, available to the public at reasonable times during regular business hours (see 61.5(4) for confidentiality provision). (The permittee may assess a reasonable charge for copying. The permittee may require a member of the public to provide advance notice.)

   The renewal permit identifies retention requirements for records in accordance with the Recordkeeping subsection as "the effective period of the permit and three years following." This retention requirement removes the ambiguity with determining the time for which a record "is no longer being actively utilized for stormwater management," which was the basis for the overall retention of records requirement in Part I.K.2.

II. PART II

Part II of the permit has been updated with new or revised standard language that is in all permits issued by the division.

A. **NOTIFICATION REQUIREMENTS**

The Program Modification section was deleted because these procedures are no longer necessary.

Many of these requirements were included in the section entitled Permittee Responsibilities in the previous permit. The renewal permit now contains the following subsections:

1. Notification to Parties: updated contact information for oral and written notification
2. Change in Discharge or Wastewater Treatment: new section

3. Special Notifications Definitions: new section
4. Non-Compliance Notification: updated language
5. Other Notification Requirements: new section
6. Bypass Notification: new section
7. Upsets: no new requirements from pervious permit. Permittees should note that this section of the permit applies to upsets to the permittee's stormwater program. This section does not apply to upsets for individual control measures on construction sites.
8. Discharge Point: new section
9. Proper Operation and Maintenance: updated language
10. Minimization of Adverse Impact: updated language
11. Removed Substances: new section
12. Submission of Incorrect or Incomplete Information: updated language
13. Bypass: new section
14. Reduction, Loss, or Failure of Treatment Facility: new section

B. **PERMITTEE RESPONSIBILITIES**

Many of these requirements were included in the section entitled Permittee Responsibilities in the previous permit. The renewal permit now contains the following subsections:

1. Inspections and Right to Entry: updated language
2. Duty to Provide Information: no new requirements from pervious permit
3. Transfer of Ownership or Control: new section
4. Availability of Reports: updated language
5. Modification, Suspension, Revocation, or Termination of Permits By the Division: updated language
6. Oil and Hazardous Substance Liability: no new requirements from pervious permit
7. State Laws: no new requirements from pervious permit
8. Permit Violations: new section
9. Property Rights: no new requirements from pervious permit
10. Severability: no new requirements from pervious permit
11. Renewal Application: new section
12. Confidentiality: new section
13. Fees: updated language
14. Duration of Permit: new section
15. Section 307 Toxics: new section
16. Effect of Permit Issuance: new section

L. Total Maximum Daily Load

Section 61.8(11)(a)(iv) of Regulation 61 requires that "The permittee must comply with any more stringent effluent limitations in the permit, including permit requirements that modify, or are in addition to, the minimum control measures , based on an approved TMDL or equivalent analysis. The division may include such more stringent limitations based on a TMDL or equivalent analysis that determines such limitations are needed to protect water quality."

Impaired Segments

1. COSPMS04: Barr Lake and Milton Reservoir, Dissolved Oxygen TMDL and COSPMS04: Barr Lake and Milton Reservoir, pH TMDL

   MS4 Discharges Under Permits Covered by this Renewal:

- COR080010: Arapahoe County
- COR080003: Douglas County
- COR080004: City of Greenwood Village
- COR080016: City of Lone Tree
- COR080021: City of Centennial, (Southwest Metro Stormwater Authority)

The dissolved oxygen TMDL is an addendum to the pH TMDL and the implementation of the TMDLs will be phased concurrently with an adaptive management approach. The TMDL focuses on a required 20 percent reduction in target load of total phosphorous for MS4 Regulated Areas for both Barr and Milton. Implementation of the TMDL recommendations is underway and continues with the renewal permit. The division's determination is that the effluent limitations in the Post-Construction Stormwater Management in New Development and Redevelopment section of the permit that require control measures be implemented for redevelopment and will result in controls being implemented that are adequate to meet this load reduction. The TMDL also recommends monitoring to implement the adaptive management approach for this TMDL. The division's determination is that the terms and conditions in the permit regarding the Regulation 85 MS4 data report are adequate for this permit term. This determination will be reviewed every permit term and will consider the results from the Regulation 85 routine review to adjust permit requirements as needed to implement the TMDL requirements.

The TMDL states that the Cherry Creek release is incorporated into the background load and there is no permit requirements for areas draining directly to the Cherry Creek Reservoir basin. Phosphorus controls required by the Cherry Creek Basin Control Regulation are adequate to control phosphorus in this TMDL.

The division determined that there are no additional requirements that apply to discharges to the Cherry Creek Reservoir basin therefore Part III was not included in the permit.

2. COSPUS14: South Platte River Bowles Avenue to Burlington Ditch, *E. coli* TMDL

   MS4 Discharges Under Permits Covered by this Renewal:
   - COR080010: Arapahoe County

   The TMDL includes density based wasteload allocations for all MS4 discharges to the segment of 126 cfu/100ml *E. coli* Density. For the permittees covered by this permit that discharge into this segment, the division has determined that the effluent limitations in the Illicit Discharge Detection and Elimination program are adequate to meet the wasteload allocation. Monitoring conducted in 2007 for MS4 outfalls for these municipalities did not identify that sources existed that were expected to contribute to exceedance of the wasteload allocation. The requirement of the Illicit Discharge Detection and Elimination program are expected to result in this condition being maintained.

M. DEFINITIONS

The definitions below are intended strictly for clarification purposes, and may not contain the full legal definition as per regulation. For the purposes of this permit:

1. Applicable Construction Activity: Construction activities with land disturbance (surface disturbing and associated activities) of one or more acres, or disturbing less than one acre if that construction

activity is part of a larger common plan of development or sale that would disturb, or has disturbed one or more acres, unless excluded in Part I.E.3.a.i. Applicable construction activities include the land disturbing activity and all activities and materials associated with the construction project and located at, or contiguous to, the land disturbing activities.

2. Base Design Standard: The minimum design standard for new and redevelopment before applying exclusions or alternative standards.
3. Best Management Practices: Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "state surface 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. For the purpose of this permit, the term BMP is used interchangeably with the term control measure, and can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices.
4. Classified State Water: A classified state water is a state water with a classification in the Classification and Numeric Standards Regulation for each of the seven river basins in Colorado. Classifications for each segment within the river basin can be found in the numeric and standards table for each basin regulation.
5. Common Plan of Development or Sale: A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related. The Division has determined that “contiguous” means construction activities located in close proximity to each other (within ¼ mile). Construction activities are considered to be “related” if they share the same development plan, builder or contractor, equipment, storage areas, etc.
6. 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 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 an excluded site under Part I.E.4.a.i. Construction activity is from initial ground breaking to final stabilization regardless of ownership of the construction activities.
7. Construction Dewatering: Discharge of groundwater, surface water, and stormwater that has mixed with the groundwater and/or surface water (i.e. commingled stormwater runoff) that has come into contact with applicable construction activities.
8. Contiguous: Within 0.25 miles.
9. Control Measure: 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 structure controls and treatment devices.
10. Control Measure Requiring Routine Maintenance: Any control measure that is still operating in accordance with its design and the requirements of this permit, but requires maintenance to prevent associated potential for failure during a runoff event. See also Inadequate control measure.
11. Discharge: Discharge: The discharge of pollutants as defined in section 25-8-103(3) C.R.S. For the purposes of this permit, discharges do not include land application or discharges to the ground.
12. Discharge of a Pollutant: The introduction or addition of a pollutant into state waters. See 25-8-103(3) C.R.S.
13. Division: The Water Quality Control Division of the Colorado Department of Public Health and Environment.

14. Dry Weather Discharge: A discharge not resulting from surface runoff from stormwater.
15. Effluent Limitation: Any restriction or prohibition established under the Colorado Water Quality Control Act, state regulations, or federal law 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.
16. Exclusion: A removal of the applicability of the terms or conditions in this permit from applying to the given conditions.
17. Exemption: An exemption, waiver, or variance implemented by the permittee for permittee control measures used to meet the effluent limits in this permit.
18. Final Stabilization: The condition reached when all ground surface disturbing activities at the site have been completed, and for all areas of ground surface disturbing activities a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.
19. Good Engineering, Hydrologic and Pollution Control Practices: Methods, procedures, and practices that:
    a. Are based on basic scientific fact(s).
    b. Reflect best industry practices and standards.
    c. Are appropriate for the conditions and pollutant sources.
    d. Provide appropriate solutions to meet the associated permit requirements, including practice based and numeric effluent limits.
20. Green infrastructure: Generally refers to control measures that use vegetation, soils, and natural processes or mimic natural processes to manage stormwater. Green infrastructure can be used in place of or in addition to low impact development principles.
21. Illicit Discharge: Any discharges to an MS4 that is not composed entirely of stormwater except discharges specifically authorized by a CDPS or NPDES permit and discharges resulting from emergency fire fighting activities. Permittees should note that there are many types of illicit discharges that in accordance with the permit need to be effectively prohibited. Only the discharges listed in Part.I.2.a.v. can be excluded from being effectively prohibited.
22. Impervious Area: Developed areas with covering or pavement that prevents the land's natural ability to absorb and infiltrate typical precipitation and irrigation events. Impervious areas include, but are not limited to; roof tops, walkways, patios, driveways, parking lots, impervious storage areas, impervious concrete and asphalt, and any other continuous watertight pavement or covering.
23. Inadequate Control Measure: Any control measure that is not designed, implemented, or operating in accordance with the requirements of the permit, including the specific requirements in each program area in Part I.E or requirements for specific permittees in Part III, and implemented and maintained to operate in accordance with the design. See also Control measure Requiring Routine Maintenance.
24. Irrigation Return Flow: Tailwater, tile drainage, or surfaced groundwater flow from irrigated land.
25. Land Disturbing Activity: Any activity that results in a change in the existing land surface (both vegetative and non-vegetative). Land disturbing activities 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. Compaction that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity.
26. Minimize: For purposes of implementing control measures of this permit, means reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.
27. MS4: A municipal separate storm sewer system. See municipal separate storm sewer system.

28. Municipality/Municipal: 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 CWA(1987).
29. Municipal Separate Storm Sewer System (MS4): 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). See 5 CCR 1002-61.2(62).
30. Municipal Separate Storm Sewer System Outfall (Outfall): A point source, as defined herein, at the point where a municipal separate storm sewer discharges to state waters and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other state waters and are used to convey state waters.
31. New Development: Land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision for a site that does not meet the definition of redevelopment.
32. New Permittee: Permittee not covered under a previous MS4 general permit.
33. Non-Structural Control Measures: Includes control measures that are not structural control measures, and include, but are not limited to, control measures that prevent or reduce pollutants being introduced to water or that prevent or reduce the generation of runoff or illicit discharges.
34. Operator: The person or entity who is responsible for the overall operation of the facility or activity from which the associated discharge originates.
35. Outstanding Waters: A type of designation. Outstanding waters are designated by the Water Quality Control Commission.
36. Pavement Management Sites: Sites, or portions of sites, for the rehabilitation, maintenance, and reconstruction of pavement, which includes roadway resurfacing, mill and overlay, white topping, black topping, curb and gutter replacement, concrete panel replacement, and pothole repair. The purpose of the site must intend to provide additional years of service life and optimize service and safety. The site also must be limited to the repair and replacement of pavement in a manner that does not result in an increased impervious area and the infrastructure must not substantially change. The types of sites covered under this exclusion include day-to-day maintenance activities, rehabilitation, and reconstruction of pavement.
37. Point Source: Any discernible, confined, and discrete conveyance, including, but not limited to, 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 does not include irrigation return flow. See 5 CCR 102-61.2(75).
38. Pollutant: Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal or agricultural waste. See 5 CCR 1002-61.2(76).
39. Pollution: Man-made or man-induced, or natural alteration of the physical, chemical, biological, and radiological integrity of water. See 5 CCR 1002-61.2(77)
40. Redevelopment: Includes a site that is already substantially developed and has 35% or more of existing hard surface coverage, the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including

construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities.

41. Regulatory Mechanism: The mechanism that allows the permittee to implement and enforce the requirements of this permit.
42. Renewal Permittee: Permittee that was covered under a previous MS4 general permit.
43. Roadway: Roads and bridges that are improved, designed or ordinarily used for vehicular travel and contiguous areas improved, designed or ordinarily used for pedestrian or bicycle traffic, drainage for the roadway, and/or parking along the roadway. Areas primarily used for parking or access to parking are not included.
44. Site Plan: Also known as construction stormwater site plans, sediment and erosion control plans, stormwater pollution prevention plans, drainage reports, drainage plans, stormwater management plans, drainage and erosion control plans, etc.
45. Small Municipal Separate Storm Sewer System: Any municipal separate storm sewer that is not defined as a "large" or "medium" municipal separate storm sewer system pursuant to Regulation 61. This term includes publicly-owned systems similar to separate storm sewer systems in municipalities (i.e., non-standard MS4s), including, but not limited to, systems at military bases and large education, hospital or prison complexes, if they are designed for a maximum daily user population (residents and individuals who come there to work or use the MS4's facilities) of at least 1,000.
46. Stormwater: Stormwater runoff, snow melt runoff, and surface runoff and drainage. See 5 CCR 1002-61.2(103).
47. Structural Control Measures: Includes control measures that are comprised of facilities and structures that remove pollutants from water or retain, reuse, or provide for infiltration or evaporation of water.
48. To the Extent Allowable under state or Local Law: A standard of implementation of permit requirements and means that to the extent that the permittee is not constrained by state or local laws. Local laws that can be legally changed by the permittee to allow implementation of permit requirements do not constitute a barrier to implementation of a permit requirement.
49. Total Maximum Daily Loads (TMDLs): The sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background. For the purposes of this permit, a TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes WLAs, LAs, and must include a margin of safety (MOS), and account for seasonal variations. (See section 303(d) of the Clean Water Act and 40 C.F.R. 130.2 and 130.7).
50. Water Quality Capture Volume (WQCV): The volume equivalent to the runoff from an 80th percentile storm, meaning that 80 percent of the most frequently occurring storms are fully captured and treated and larger events are partially treated.
51. Water Quality Standards: Any standard promulgated pursuant to section 25-8-204 C.R.S. For purposes of this permit, water quality standards are a narrative and/or numeric restriction established by the Water Quality Commission applied to state surface waters to protect one or more beneficial uses of such waters. Whenever only numeric or only narrative standards are intended, the wording shall specifically designate which is intended. See 5 CCR 1002- 31.5(37).
52. Waters of the State of Colorado: Any and all surface waters and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. This definition can include water courses that are usually dry. Note: this permit is only applicable to applicable discharges to surface waters of the state.

N. REFERENCES

A. Colorado Department of Public Health and Environment, Water Quality Control division Files, audited permittees.

B. Colorado Department of Public Health and Environment, Water Quality Control division, stakeholder input following pre public notice meeting, May 6, 2013.

C. Colorado Department of Public Health and Environment, *Low Risk Discharges Policy (WQP-27)*, Colorado Department of Public Health and Environment, effective June 13, 2003.

1. Low Risk Discharge Guidance: Potable Water Monitoring Devices, January 8, 2014
2. Low Risk Discharge Guidance: Potable Water, Revised August 2009
3. Low Risk Discharge Guidance: Snow Melting, June 2008
4. Low Risk Discharge Guidance: Surface Cosmetic Power Washing Operations to Land, July 2010
5. Low Risk Discharge Guidance: Swimming Pools, June 2008
6. Low Risk Discharge Guidance: Uncontaminated Groundwater to Land, September 2009

D. Colorado Department of Public Health and Environment, Water Quality Control division, Total Maximum Daily Load for:

1. COSPBO02: Boulder Creek from North Boulder Creek to South Boulder Creek. E coli
2. COSPMS04: Barr Lake and Milton Reservoir, Dissolved Oxygen
3. COSPMS04: Barr Lake and Milton Reservoir, pH TMDL
4. COSPMS04: Barr Lake and Milton Reservoir, Implementation Plan for pH TMDL
5. COSPUS14: South Platte River Bowles Avenue to Burlington Ditch, E coli TMDL
6. COGUUN12: tributaries to the Uncompahgre River, Selenium TMDL,
7. COGUUN4b: Uncompahgre River from LaSalle Road to Confluence Park, Selenium TMDL,
8. COGUUN4c: Uncompahgre River from Confluence Park to the Gunnison River, Selenium TMDL

E. Colorado Discharge Permit System Regulations, Regulation 5 CCR 1002- 61, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2009.

F. Douglas County. 2012. *Douglas County Large Lot Runoff Evaluation—Part 2*. Muller Engineering Company, Inc. Lakewood, Colorado.

G. Regulations Controlling Discharges to Storm Sewers, Regulation 5 CCR 1002-65, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective May 30, 2008.

H. Cherry Creek Reservoir Control Regulation, 5 CCDR 1002-72, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective November 30, 2012.

I. Nutrient Management Control Regulation, Regulation 5 CCR 1002-85, Colorado Department of Public Health and Environment, Water Quality Control Commission, effective September 30, 2012.

J. state MS4 General Permits. Review of portions of the following permits: Arkansas (2009), California 2013), Kansas (2004), Ohio (2009), New Jersey (2009), New York (2010), Pennsylvania (2002), Texas (2007), Utah (2010), Vermont (2012)

K. UDFCD. 2010. *Urban Storm Drainage Criteria Manual: Volume 3 – Best Management Practices*. Urban Drainage and Flood Control District, Denver, CO

L. Urbonas B., J.C.Y. Gou, and L.S. Tucker. 1989 updated 1990. Sizing Capture Volume for Stormwater Quality Enhancement. *Flood Hazard News*. Urban Drainage and Flood Control District, Denver, CO

M USEPA. 2014. *Post-Construction Performance Standards and Water Quality-Based Requirement: A Compendium of Permitting Approaches*. US Environmental Protection Agency, Washington, DC.

N USEPA. 2010. *MS4 Permit Improvement Guide*. US Environmental Protection Agency, Washington, DC.

O USEPA.1999. National Pollutant Discharge Elimination System –Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. US Environmental Protection Agency, Washington, DC.

P USEPA. 1983. *Results of the Nationwide Urban Runoff Program*. US Environmental Protection Agency, Washington, DC.

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The most significant areas for which input was received from stakeholders that was directly related to development of the first draft permit are summarized in the Table 2, along with a summary of the resulting permitting approach.

Table 2: Stakeholder Input into Permit

Subject	Stakeholder Input	Approach for Draft Permit
Effluent Limitations	Stakeholder input indicated a preference to not include effluent limitations in the permit.	The division has included effluent limitations in the permit to provide clarity and transparency in permit requirements and increase efficiency. The previous permit required the permittee to develop a program and division to review and approve the program prior to implementation. This framework was less transparent, resulted in highly variable implementation, did not result in overall compliance with permit conditions, caused uneven economic implications and was not an efficient use of staff time. The division explained to stakeholders that the permit will use the term "effluent limitation" to reflect terms and conditions of the permit that are intended to reduce pollutants in the discharge. This framework also allows the division and permittees to gain efficiencies with the PDD framework and the program modification requirements, which have been deleted from the renewal permit.
Permit Area (County Growth Areas)	Stakeholders indicated a preference for allowing exceptions for traditionally rural character development. This would exclude non-urban character development from inclusion in the construction and post construction requirements. Stakeholder also indicated they preferred for the permit to not address reporting or requirements for activities outside of the Growth Areas.	The division incorporated stakeholder input and the draft renewal permit allows the permittees to develop and submit growth area maps with the permit application. The permit includes exclusions for sites that are not urban character. The division also did not include reporting or requirements for activities outside of the growth areas. The lack of proactive reporting for activities outside of the growth areas will likely result in the need for future information gathering and discussions with permittees to access the accuracy of the projected growth areas.

PDD requirements	Stakeholders prefer that the permit does not include a requirement for the PDD to be organized according to the permit numbering scheme. Stakeholders preferred a timeframe to provide the PDD to the division, as opposed to an initial division concept that the PDD be "immediately available."	The required elements of the PDD are based on the division's determination of a PDD structure and content that would allow the PDD to be a tool for staff training and transitions during staff changes; in additional to a publicly – available document that provides a summary of the permittee's program. The division did not include the requirement that the PDD be organized to mirror the structure of the permit. The division did not include the requirement that the PDD be "immediately available." The division has included a 10 day time frame for the PDD to be provided to the division.
Public Education	Stakeholder input included versions of activity tables and minimum standards for the permittee's webpage. Stakeholder input also included doubt about the effectiveness of a webpage.	The permit includes an activity table that was based on input provided by stakeholders. The division removed the web site requirement in the second draft of the renewal permit, but a web site is not included in table of activities.
Public Education: Nutrients	Stakeholder input indicated preference to not include minimum sources to target for education and outreach. Stakeholder input indicated that the nutrient regulations contained adequate requirements for permittees to identify sources.	The permit does not include minimum sources for permittees to target with education and outreach. The permit does include minor additions to what is in the regulation to provide clear and measurable permit conditions.
Illicit Discharge and Detection: Occasional Incidental Discharges	Stakeholder input indicated a range of responses following the division's concepts that included eliminating the provision for permittees to exclude additional discharges from being illicit discharges (i.e., occasional incidental discharges). Most stakeholders expressed a desire to keep the concept of occasional incidental discharges.	The division's initial concept was to eliminate this provision because it provides a method for permittees to allow a discharge that is not allowed by state law, is reasonable to prohibit, and/or has the potential to impact water quality. Additionally, the previous permit language lacks transparency since public notice is not required when exempting a discharge from prohibitions. Based on feedback, the division has revised the approach to incorporate requirements to address these concerns. The draft permit addresses providing for public notice and transparency regarding discharges and limiting allowed discharges to those with low risk of water quality impacts or for which prohibition is not practicable.

Illicit Discharge and Detection: Centralized Recordkeeping	Stakeholder input indicated concern regarding a centralized database of illicit discharges. Stakeholder input indicated that entities outside of permittee control (e.g., volunteer fire department, special district) may be an intake and response group for illicit discharges yet the permittee does not have control over this entity.	The draft permit requires permittee to provide a centralized database of illicit discharge incident reporting. The second draft of the renewal permit allows the permittee the flexibility to have several centralized databases. The requirement is only applicable illicit discharges identified by, or reported to, the permittee. The permit does not include requirements for information reported to entities not under the control of the permittee.
Illicit Discharge and Detection: Enforcement	Stakeholder input indicated a concern regarding a requirement to develop and implement an enforcement response guide or plan that that included requirements for specific responses. Stakeholder input indicated that illicit discharges are unique and the enforcement should be tailored to the situation.	The permit does not pair violations with required responses. The draft permit requires that permittees address findings of a similar nature consistently.
Construction Sites: Control Measure Requirements	Stakeholder input included concern regarding a permit requirement for minimum control measure on construction sites, specifically for requiring a sediment control measure for all disturbed areas. Stakeholders expressed concerns that such a design standard would need to allow for incidents when controls were not necessary.	The division has determined that inadequate sediment control is a primary factor in construction site non-compliance. The division has determined that minimum standards are needed and has provided minimum requirements for control measures for all construction sites. The division incorporated concerns identified by stakeholders in developing the minimum requirements for sediment control measures, which is included in the draft renewal permit.
Construction Sites: Inspections and Documentation	Stakeholder input indicated a preference to maintain flexibility to implement inspection procedures and activities. Stakeholder input included concern regarding an inspection frequency more frequent than monthly with programs managed by limited staff people. Specifically with 14 day inspections, stakeholders were concerned about the ability of one staff inspector to take leave yet retain compliance.	The division has determined that minimum standards were needed in the permit for the construction sites program to require inspections. The division incorporated stakeholder input to include a minimum standard in the permit.

Construction Sites: Overlapping Jurisdictions	Stakeholder input indicated a preference to allow for permittees to rely on a neighboring permittees standards and oversight for projects with overlapping jurisdictions.	The draft permit allows permittees to enter into written agreements to use one permittee's requirements to regulate in an adjacent jurisdiction on an overlapping project.
Construction Sites: Enforcement Response Plan	Stakeholder input indicated a concern regarding a requirement to develop and implement an enforcement response guide or plan that that included requirements for specific responses. Stakeholder input indicated that construction activities are unique and the enforcement should be tailored to situation.	The permit does not pair violations with required responses. The draft permit requires that permittees to address findings of a similar nature consistently. The permit includes common enforcement responses for the permittee to address.
Post Construction: Excluded projects related to Roadway Development	Stakeholder input expressed a preference for allowing additional adjacent paved areas without requirement for permanent control measure. The Water Quality Forum – MS4 workgroup provided a framework for the exclusion.	The division engaged in extensive discussion with the Water Quality Forum – MS4 workgroup regarding roadway permanent water quality control measure. The division has provided an exclusion of roadway redevelopment in the draft renewal permit. The exclusion provides a framework for adding impervious area without requiring permanent water quality control measure.
Post Construction: Pavement management	Stakeholder input expressed concern regarding activities related to pavement management and a desire for clear definitions of activities that are considered pavement management and will not require post-construction control measure.	The division excludes maintenance and pavement management activities by providing a definition of pavement management in the draft renewal permit.
Post Construction: Underground projects	Stakeholder input expressed a preference for excluding underground projects (e.g., underground utilities) that do not permanently alter the surface from the permanent water quality control measure requirements.	The division has excluded activities for installation or maintenance of underground utilities or infrastructure that does not permanently alter the terrain, ground cover, or drainage patterns from prior to the project.
Post Construction: Regional WQCV Facility	Stakeholder input indicated a preference to allow an alternative design standard when a site drains to regional WQCV facility.	The division has provided alternative treatment standards and requirements when a site drains to regional WQCV facility.

Post Construction: Design Standard and Exclusions	Stakeholder input indicated a preference for the division to provide additional design standard options if 100% WQCV was going to be implemented as a design standard; specifically regarding redeveloped sites, constrained sites and regional control measure.	The division recognizes that treatment must be tailored to the land development site and the draft permit provides several options for post construction requirements.
Post Construction Definition of Redevelopment	Stakeholder input included a recommended concept definition of redevelopment, which stated that redevelopment applies when sites are 35% or more impervious area.	The division's approach for the definition includes existing 35% impervious area as a benchmark to define redevelopment.
Post Construction: Post Acceptance Site Inspection	Stakeholder input included a concern regarding requiring inspections of permanent water quality control measure on residential lots. Permanent control measures on residential lots tend to be vegetative and include infiltration. Stakeholders were concerned about the workload to address distributed controls and expressed that adding an inspection burden on residential controls may reduce the use of these source controls. Stakeholder input preferred allowing the exiting land use regulations for inspection and enforcement of residential control measure.	The division provided an exclusion from the minimum inspection frequency for permanent control measure serving an individual residential lot.
Municipal Operation and Good Housekeeping	Stakeholder input included concern that revised requirements for municipal facility runoff control plans (MFRCP) would require permittees to duplicate previously completed information (e.g., standard operating procedures) into a new plan format.	It is not the division's intent for the permittee to duplicate paperwork. The division has provided language in the draft renewal permit that existing standard operating procedures can be used to the meet the permit requirement. Some permittees may need to supplement additional documents to meet the new record keeping requirements.
Municipal Operation and Good Housekeeping: Bulk Storage	Stakeholder input identified concerns that bulk storage may not be practicable.	The division has determined that requiring bulk storage in the permit is practicable based on the long-term inclusion of this requirement in stormwater discharge permits for industrial activities in Colorado.

Monitoring	Stakeholder input expressed concern regarding selenium and E coli monitoring concepts discussed during stakeholder meetings. Stakeholders specifically addressed concern over the potential for MS4s not to be contributing to impairment, the limited solutions for E coli and selenium impairment, and concern over program funds being redirected from other program areas that may be more effective at improving water quality. Stakeholder input included other methods of determining E coli sources. Stakeholder feedback included concerns over costs because some permittees stated that the potential number of outfalls to be monitored was unknown and therefore the cost to implement a monitoring program was unknown.	The division included option 1 on the second draft of the renewal permit.
Monitoring	Stakeholders provided input that irrigation return flows are interconnected with the MS4 system for some permittees.	It is the division's intent to exclude irrigation season flows from the monitoring requirements. The renewal permit includes a waiver option for permittees to sample outside of a required quarter to avoid the irrigation season. An additional exclusion is included for dry weather flows that are predominantly associated with irrigation return flows or supply.
Coal Tar-Based Asphalt Sealant	Stakeholder input indicated preference for not including requirements regarding coal tar-based asphalt sealant.	The division provided stakeholder information from the United States Geologic Survey regarding coal tar-based asphalt sealant, which contains a high concentration of poly aromatic hydrocarbons (PAHs). Some PAHs are classified as probable carcinogens. The division has determined that the coal tar asphalt sealant is a potential pollutant in urban runoff and/or could limit the ability for maintaining post-construction control measure. However, the draft permit does not included associated requirements.

Table 3: Summary of Audit Findings

NOTE: An "x" denotes that the permittee had the audit finding described.

Finding	Permittee #1 Audit Date: 02/08/2010	Permittee #2 Audit Date: 02/25/2010	Permittee #3 Audit Date: 03/03/2010	Permittee #4 Audit Date: 03/23/2011	Permittee #5 Audit Date: 04/07/2010	Permittee #6 Audit Date: 10/20/2010	Permittee #7 Audit Date: 01/24/2011	Permittee #8 Audit Date: 04/11/2011	Permittee #9 Audit Date: 05/10/2011	Permittee #10 Audit Date: 10/04/2012	Total	Percentage of Auditees with this Specific Finding
General-Program Description Document did not reflect current activities	X	X	X	X	X	X	X	X	X	X	10	**100%**
IDDE-allowed a timeframe to correct an illicit discharge							X	X			2	**20%**
IDDE-did not list all enforcement tools that are being used by staff in the regulatory mechanism				X		X			X		3	**30%**

IDDE-allowed variances, exemptions, and waivers for certain discharges. This is not allowed for in Regulation 61						X	X		X		3	**30%**
Construction*--failed to review all site plans for construction projects that disturb 1 acre or more		X	X		X	X	X		X	X	7	**70%**
Construction*--all site plans did not match field conditions	X	X				X		X		X	5	**50%**
Construction*--allowed for a timeframe to correct BMP		X	X	X	X	X		X		X	7	**70%**

Construction*--at least one construction site had at least one inadequate BMP	X	X		X	X	X		X		X	7	**70%**
Construction*--at least one construction site had at least one BMP that required maintenance		X		X	X	X		X		X	6	**60%**
Construction*--allowed for recalcitrant control measure violations				X	X	X		X		X	5	**50%**
Post-Construction—not all of the construction site was covered by one or more control measures at one or more construction sites	X	X	X	X	X	X	X			X	2	**80%**

Post-Construction--no control measures were installed on at least one site	X		X	X		X	X			X	6	**60%**
Post-construction--no control measures were installed for at least some of at least one construction site		X			X						2	**20%**
Post-Construction--did not follow their own SOP for site plan review			X		X			X		X	4	**40%**
Post-Construction--did not inspect control measures in accordance with their own schedule or did not inspect control measures at all						X		X		X	3	**30%**

Post-Construction--at least one control measure was inadequate or in need of maintenance			X	X	X	X	X			X	6	**60%**
Post-Construction--at least one control measures did not conform to the approved site plan			X	X	X	X				X	5	**50%**
Good housekeeping--did not develop and maintain written procedures for all of the municipal operations		X				X					2	**20%**
Good housekeeping--did not have secondary containment for at least one primary tank of a chemical	X	X		X			X	X			5	**50%**
Good housekeeping--inadequate program to prevent or reduce pollutant runoff from municipal operations	X	X	X	X	X	X	X	X			8	**80%**

* 30% of permittees did not have any active construction sites.