

# ATTACHMENT C

## STATE OF CALIFORNIA

### CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

#### MONITORING AND REPORTING PROGRAM ORDER NO. R6T-2011-(TENT) NPDES NO. CAG616001

#### UPDATED WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR STORM WATER/URBAN RUNOFF DISCHARGES FROM EL DORADO COUNTY, PLACER COUNTY, AND THE CITY OF SOUTH LAKE TAHOE WITHIN THE LAKE TAHOE HYDROLOGIC UNIT

#### I. Pollutant Load Reduction Monitoring Requirements

##### A. Lake Clarity Crediting Program

The Lake Tahoe TMDL established pollutant load estimates and load reduction requirements for total nitrogen, total phosphorus, and fine sediment particles that source categories must meet on an average annual basis. The Lake Clarity Program (Crediting Program) defines a system to evaluate and track pollutant load reductions to demonstrate compliance with the load reduction requirements for fine particle sediment in the TMDL. This system provides methods for consistently linking implementation of pollutant controls to expected water quality benefits by using average annual pollutant load estimates generated by numeric modeling tools. It sets Lake Clarity Credits (credits) for actions taken to reduce pollutant loads as required by the Lake Tahoe TMDL load allocations. Credits are used in this Monitoring and Reporting Program to provide a consistent metric for assessing compliance with average annual pollutant load reduction requirements. The Crediting Program therefore provides a comprehensive and consistent accounting system to track pollutant load reductions of fine particle sediment into the LTHU from urban storm water, establishes a consistent approach for estimating load reductions, provides methods to assess ongoing performance of implementation actions, and guides interaction between the Water Board and Permittees regarding load reduction progress assessment.

Load reductions are defined as the difference between the estimated average annual amount of pollutants entering Lake Tahoe under standard baseline conditions and the estimated average annual amount of

pollutants entering the lake under expected conditions. Effective implementation of any pollutant control can generate credits, provided that the Permittees effectively demonstrate to the Water Board that the action is (1) expected to reduce the load of the pollutants of concern to Lake Tahoe from urban land uses, (2) supported by reasonable load reduction estimate, and (3) will be effectively implemented and maintained over time.

Credits are acknowledged, or *awarded*, for effective ongoing implementation of pollutant controls within an urban subwatershed, or *catchment*. Credit potential for a catchment is based on the estimation of load reduction from baseline to expected conditions, and actual awarded credits are based upon comparing actual conditions with expected conditions.

Effective implementation of pollutant controls results in actual conditions of urban lands and treatment best management practices (BMPs) that are at or better than the expected conditions, and which are used as the basis for load reduction estimates. Actual conditions, as assessed during annual inspections outlined in Section I.E of this Monitoring and Reporting Program, are compared to the expected conditions to determine the appropriate amount of credit to award in a given year. When actual conditions are at or better than expected conditions, the actual pollutant loading from the catchment is likely to be the same or better than the expected pollutant loading and full credit will be awarded. If actual conditions are worse than expected, the actual loading is likely to be higher than expected loading and the credit award will be less than the full credit potential amount.

Credits are awarded and tracked annually. The credit accounting period is a water year, October 1 through September 30. Each year is a unique accounting period – credits awarded in one year cannot be used to meet requirements in a subsequent year.

The following sections briefly describe components of the Crediting Program protocols and establish phased Crediting Program implementation requirements.

#### B. Credit Definition and Credit Requirements

The Crediting Program Handbook (Attachment D) defines one (1) Lake Clarity Credit as equal to  $1.0 \times 10^{16}$  fine sediment particles with a diameter smaller than 16 micrometers ( $\mu\text{m}$ ).

By **November 12, 2016** each Permittee must earn and maintain enough credits to demonstrate, at a minimum, a 10 percent reduction of fine sediment particles from its baseline load in accordance with Table I.B below.

**Comment [A1]:** Permit Section IV.B says by Nov. 9 – which is correct?

**Comment [adw2]:** What about load reductions of nitrogen and phosphorus? If these reductions are covered by reductions in FSP, should explain here why FSP reductions will get the required levels of N and P reductions.

Table I.B – Lake Clarity Credit Requirements

Jurisdiction	Lake Clarity Credit Requirement
<b>El Dorado County</b>	
<b>Placer County</b>	
<b>City of South Lake Tahoe</b>	

C. Crediting Program Handbook

The Lake Clarity Crediting Program Handbook version 1.0 (Handbook) defines the protocols for implementing the Crediting Program. The Handbook describes the roles and responsibilities of different organizations, scientists, and interested stakeholders and includes detailed technical guidance for estimating load reductions, preparing catchment credit schedules, reporting conditions and awarding credits. The Handbook provides forms, templates, and examples to aide users in implementing the process.

Because the Handbook contains the detailed guidance and technical information needed for the Permittees to implement the Crediting Program, the Crediting Program Handbook version 1.0 is hereby incorporated into ~~this Monitoring and Reporting Program~~the Permit as Attachment 4D, and all procedures in the Lake Clarity Crediting Program Handbook are incorporated as enforceable requirements under this Permit. All Handbook references to “regulator” should be understood to mean the Water Board.

D. Catchment Credit Schedules

The credit potential for an urban catchment (or subwatershed) is based on estimates of load reduction from baseline to expected conditions. The Crediting Program Handbook describes a document called a *catchment credit schedule*, which defines the baseline condition for all catchments and provides the means to inventory treatment facilities, roadways, private property BMPs, and other pollutant controls. This information is then used to compare with the expected conditions after the implementation of pollutant controls and forms the basis for the load reduction estimate and establishes the credit potential for a given catchment.

Crediting Program Handbook Chapter 1 describes the steps for developing a catchment credit schedule and submitting it for Water Board approval. Handbook Appendix A includes a complete example of each step in the process of establishing a catchment credit schedule, and the Tools and Templates section of the Handbook provides detailed instructive support. Generally, the process steps are:

1. Estimate pollutant load reductions and draft catchment credit schedule (see Handbook section 1.1).
2. Verify pollutant load reduction estimate and catchment credit schedule (see Handbook section 1.2).
3. Register catchment in the Accounting and Tracking Tool (see Handbook section 1.3).

To demonstrate proficiency at developing catchment credit schedules and to document pollutant load reduction actions, each Permittee shall prepare and register at least two (2) catchment credit schedules by **March 15, 2012** and register additional catchments **as needed by March 15** every year thereafter to ensure each Permittee will earn enough credits to meet the requirements contained in Table I.B above.

Comment [adw3]: What is needed? Clarify.

#### E. Condition Assessments

Credits are awarded annually by the Water Board for ongoing implementation of effective pollutant control measures that result in actual, observable conditions of urban lands and treatment BMPs that are consistent with the expected conditions used to estimate pollutant load reductions. Actual conditions, as determined by field inspection findings, are compared to expected conditions to determine the appropriate credit award.

To ensure that actual field conditions are consistent with expected conditions used to estimate pollutant load reductions, each Permittee shall conduct treatment BMP and roadway condition assessments as described in the Crediting Program Handbook for all registered catchments.

Handbook Chapter 2.1 describes the process for defining inspection needs, performing facilities inspections, and recording results for registered catchments. Handbook Appendix B includes a detailed example of condition assessment inspection and reporting. Handbook Appendix C provides an overview of how actual conditions are compared with expected conditions to determine how much credit will be awarded.

Permittees shall use the Best Management Practices Maintenance Rapid Assessment Methodology (BMP RAM) and the Road Rapid Assessment Methodology (Road RAM) or their equivalents to assess, score, and document the actual condition of treatment BMPs and roadways. Permittees may define different assessment methods for pollutant control strategies other than treatment BMPs or roadway operations as part of the catchment credit schedule development and verification process.

BMP and Road RAM technical documents, users manuals, and databases can be found on the Water Board's website at:

[http://www.waterboards.ca.gov/lahontan/water\\_issues/programs/tmdl/lake\\_tahoe/index.shtml#imp](http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/lake_tahoe/index.shtml#imp)

The BMP and Road RAM technical documents and users manuals are hereby incorporated into this Monitoring and Reporting Program by reference.

F. Condition Assessment Method Alternatives

Should a Permittee consider using a treatment facility assessment method other than the BMP RAM, the Permittee must submit a detailed proposal to the Water Board no later than **March 15, 2012**. The submittal must demonstrate that any proposed equivalent method will effectively evaluate treatment facility condition based on treatment process (infiltration, particle settling, media filtration, or nutrient cycling), is capable of evaluating the condition of the BMP on a 0-5 scale, with 5 representing the highest functioning condition, and produces repeatable results that are consistent with the BMP RAM.

Should a Permittee consider using a roadway condition assessment method other than the established Road RAM, it must submit a detailed proposal to the Water Board Executive Officer no later than **March 15, 2012**. The submittal must demonstrate that any proposed equivalent method will effectively evaluate roadway condition based on field observations of sediment accumulation, can demonstrably extrapolate results to other roadway areas, is capable of evaluating the condition of representative roadway segments on a 0-5 scale, with 5 representing the cleanest condition, and produces repeatable results consistent with the Road RAM.

The initial submittal for alternative condition assessment methods need not contain all technical information of the proposed alternative methods, but must establish a schedule for fully developing and submitting details for Water Board approval. Water Board staff and the Executive Officer will review any proposed alternatives and will bring the proposals before the Water Board for consideration. Permittees shall use the established Road and BMP RAM protocols during the period of time while alternative methods are being developed and before such methods have been approved by the Executive Officer.

II. **Inspection Requirements**

A. Storm Wwater Facilities Inspections

Visual inspection of storm water collection, conveyance, and treatment facilities is the most efficient tool to assess facility function and evaluate maintenance needs.

For portions of a Permittee's jurisdiction not included in a Crediting Program registered catchment, Permittees shall inspect all storm water collection and conveyance facilities **at least once annually**. Permittees shall conduct facilities inspections between May 1 and September 1 of each year to provide the opportunity to perform facilities maintenance as needed.

Storm water facilities shall be inspected for signs of needed maintenance, evidence of erosion, damage from snow removal equipment, and accumulated sediment and debris. During inspections, Permittees shall also assess potential storm water pollutant sources including but not limited to:

- Private property/residential runoff
- Commercial property runoff
- Eroding cut slopes
- Eroding road shoulders
- Traction abrasive application
- Dislodged sediment from snow removal activities
- Vehicles tracking sediment onto the roadway
- Parking related erosion

Permittees shall implement an inspection documentation and tracking system to record inspection findings and prioritize maintenance needs. At a minimum, the tracking system shall provide mechanisms to document the following:

- Inspector's name
- Date and time of inspection
- Field and weather conditions at the time of the inspection
- Mapped inspection location
- Observed facility condition at time of inspection
- An assessment of needed maintenance or other follow-up actions
- Prioritization of needed maintenance

#### B. Construction Site Inspections

Permittees shall establish construction site inspection frequencies based on the water quality prioritization described in Permit Section III.B.1. At a minimum, Permittees shall conduct, at a minimum, weekly inspections during the construction season of high priority construction projects and construction projects overseen by the Permittee (e.g. erosion control projects). Permittees shall inspect each medium and low priority construction site at a frequency sufficient to ensure that sediment and other pollutants are properly controlled and that unauthorized, non-storm water discharges are prevented.

Comment [A4]: Language from Orange County MS4 permits

Permittees shall implement a construction site inspection documentation and tracking system to record inspection findings. At a minimum, the tracking system shall provide mechanisms to document the following:

- Inspector's name
- Date and time of inspection
- Field and weather conditions at the time of the inspection
- Inspection location
- Observed facility conditions
- An assessment summary of follow up and enforcement actions taken, if violations are observed.

C. Commercial, Industrial, and Municipal Site Inspections

Permittees shall establish commercial, industrial, and municipal site inspection frequencies based on the water quality prioritization described in Permit-Section III.B.2 of the Permit. Each Permittee shall inspect each high priority commercial, industrial, and municipal site at least annually. Each Permittee shall inspect each medium priority commercial, industrial, and municipal sites site at least twice during the term of this Permit. Each Permittee shall inspect each low priority commercial, industrial, and municipal sites site at least once during the term of this Permit. At a minimum, Permittees shall conduct \_\_\_\_\_ inspections of high priority commercial, industrial, and municipal sites.

Permittees shall implement a commercial, industrial, and municipal site inspection documentation and tracking system to record inspection findings. At a minimum, the tracking system shall provide mechanisms to document the following:

- Inspector's name
- Date and time of inspection
- Field and weather conditions at the time of the inspection
- Inspection location
- Observed site conditions
- An assessment of follow up and enforcement actions taken, if violations are observed.

D. Traction Abrasive and Deicing Material

The goal of traction abrasive monitoring program is to measure the quantity of material applied and recovered. To meet that objective, Permittees shall implement a program that, at a minimum, includes the following:

1. A program to track and record the total amount of abrasive and deicing material applied to its roads and parking areas per winter

season. Materials applied to Permittee roads by other approved entities shall be tracked and recorded along with Permittee applied material.

2. A program to track and record the location that maintenance crews, Permittee contractors, or other approved entities apply abrasive and deicing material (e.g. amount applied per “zone”).
3. A program to track and record the amount of sediment and other material recovered from sweeping and vacuum extraction operations. Permittees shall report separate sediment amounts recovered by sweeping and vacuum equipment, respectively.

### III. Water Quality Monitoring Requirements

#### A. Catchment Scale Runoff Water Quality Monitoring

The Crediting Program and associated load estimation tools, including the Pollutant Load Reduction Model (PLRM), estimate the average annual pollutant load reductions at a catchment scale as a result of pollutant control actions. Storm water monitoring is needed to verify that implementing cumulative pollutant control actions is resulting in measurable pollutant load reductions at the catchment outfall. Demonstrating pollutant load reductions at select catchment outlets will verify that the jurisdictions cumulative pollutant control actions are effective and confirm credit awards are warranted.

To assess the water quality at the urban catchment outfalls and provide load estimation tool comparison data, each Permittee shall ~~develop a monitoring plan that will,~~ at a minimum:

1. Establish monitoring locations at storm water outfalls at the down-gradient discharge locations (i.e. outfalls) of no less than two (2) Crediting Program registered catchments.
2. Obtain continuous flow data at the catchment outfall and report data as seasonal [Winter/Spring (December 1-May 31) and Summer/Fall (June 1-November 30)] total outflow volumes (in cubic feet).
3. Collect water samples from the outfall ~~to measure the range of pollutant concentrations experienced~~ at the catchment outlet.
4. Analyze all collected water samples for the Lake Tahoe TMDL pollutants of concern (fine sediment particles, total nitrogen, total phosphorus, and total suspended solids). The priority pollutant is fine sediment particles (FSP) less than 16 micrometers ( $\mu\text{m}$ ) in diameter, reported as the number of particles per liter of water.

**Comment [adw5]:** How do you know if these catchments will be representative? Include more specific criteria about what can be registered (i.e. catchment must include industrial / construction / residential sites, be in an area where potential for runoff to Lake Tahoe is high, etc.)

**Comment [adw6]:** How many samples, at a minimum? What frequency? Grab or composite samples? Spaced out evenly year-round, or more frequent during rainy season?

Samples collected and analyzed for FSP shall span the range of expected FSP concentrations experienced at the selected catchment outfall with an emphasis on capturing samples that represent the upper 25% of FSP concentrations experienced.

Total nitrogen, total phosphorus, and total suspended solids sample analyses may be conducted with lesser frequency than FSP analyses, provided Permittees demonstrate the proposed approach will adequately reflect the range of nutrient and total suspended solids concentrations at the catchment outlet.

Comment [adw7]: Should state a minimum frequency that would still be representative.

5. Collect continuous turbidity measurements (30 minute intervals) concurrently with flow at the catchment outfall as a proxy for FSP concentrations. Relate FSP concentration results to instantaneous turbidity measurements by developing an FSP concentration/turbidity rating curve that correlates FSP concentration data collected over the range of conditions to measured turbidity.
6. Use collected data to estimate the average concentration of each pollutant for each season monitored.
7. Calculate the total load (mass in kilograms for total nitrogen, total phosphorus, and total suspended solids and number of particles for FSP) of each pollutant for each season monitored as the product of the total seasonal volume and the average seasonal concentration.
8. Use long-term regional meteorological data to identify whether the data were collected during very dry, dry, average, wet, or very wet seasons.
9. Follow quality assurance protocols established by the Regional Storm water Monitoring Program (RSWMP) Quality Assurance Project Plan (May 2011) for all sampling activities.
10. Maintain monitoring locations and collect samples for the 2012/13 water year (October 1 – September 30) and for each water year thereafter for the remainder of this permit term.

#### B. Best Management Practice (BMP) Effectiveness Monitoring

The PLRM and other pollutant load estimation tools use the best available information to assess water quality benefits expected from implementing storm water treatment devices and other BMPs. Condition assessments are used to verify that the condition of a BMP or specific land use is being maintained at an acceptable condition. BMP effectiveness monitoring is needed to verify that each Permittee's BMP implementation and maintenance practices are resulting in actual measured pollutant load

reductions. BMP effectiveness monitoring is also need to improve installation and maintenance practices for various BMPs to optimize water quality benefits.

Each Permittee's ~~monitoring plan~~ must, at a minimum, ~~describe efforts to:~~

1. Select at least one (1) storm water treatment device or other BMP and monitor effectiveness for at least three successive years.
2. If the selected BMP is a flow-through structure/device, obtain continuous flow at the inlet and outlet to support seasonal [Winter/Spring (December 1-May 31) and Summer/Fall (June 1-November 30)] inflow and outflow volume reporting.

If the selected BMP is not a flow-through device, devise a reasonable obtain continuous flow at the inlet to support seasonal volume reporting of storm water treated/infiltrated/contained by the BMP.

If the selected BMP is a pollutant source control measure, the Permittee need not report hydrology and the monitoring plan shall describe methods to calculate the mass of pollutant controlled per land surface area.

3. Collect influent (or up gradient) and effluent (or down gradient) storm water samples to assess treatment device/activity performance
4. Collect water samples from the inlet and outlet to measure the range of pollutant concentrations at BMP inlet and outlet.
5. Analyze all collected water samples for the Lake Tahoe TMDL pollutants of concern (fine sediment particles, total nitrogen, total phosphorus, and total suspended solids). The priority pollutant is FSP reported as the number of particles per liter of water. Samples collected and analyzed for FSP shall span the range of expected FSP concentrations experienced at the inlet and outlet with an emphasis on capturing samples that represent the upper 25% of FSP concentrations experienced.

Total nitrogen, total phosphorus, and total suspended ~~sediment solids~~ samples ~~resolution~~ can be conducted with lesser frequency than FSP analyses, provided Permittees demonstrate the proposed approach will provide a representative sampling of the range of pollutant concentrations.

6. Use collected data to estimate the average concentration of each pollutant for each season monitored.

7. If evaluating a pollutant or hydrologic source control BMP, describe a data collection approach and reasonable extrapolation method to estimate volume of runoff eliminated (hydrologic source control) or the mass of the pollutant, or number of particles eliminated per unit area of the land surface affected (pollutant source control). Describe how this value will be used to estimate pollutant loads controlled per season [Winter/Spring (December 1-May 31) and Summer/Fall (June 1-November 30)].
8. Use long-term regional meteorological data to identify whether the data were collected during very dry, dry, average, wet, or very wet seasons.
9. Follow quality assurance protocols established by the Regional Storm Water Monitoring Program Quality Assurance Project Plan (May 2011) for all sampling activities.
10. Maintain monitoring locations and collect samples for the 2012/13 water year (October 1 – September 30) and for each water year thereafter for the remainder of this permit term.

C. Monitoring Plan

By **August 15, 2012** each Permittee shall prepare [and submit to the Water Board](#) a storm water monitoring plan to implement the requirements described in Sections III.A and III.B above.

For catchment outfall monitoring the plan shall describe how the requirements in Section III.A above will be met, including which catchments the Permittee proposes to monitor, proposed monitoring instrumentation, proposed sampling frequency, data management and proposed analysis and reporting methods. The monitoring shall include a detailed discussion of the rationale for chosen sampling sites, methods, and frequency and a discussion of how the proposed monitoring will support, enhance, or otherwise inform the Permittee's existing load estimation or condition assessment methods and the Permittee's pollutant load reduction program.

For the BMP effectiveness monitoring, the plan shall describe how the requirements in Section III.A above will be met, including a description of the selected storm water treatment device or BMP, a discussion of influent (or upstream) and effluent (downstream) monitoring locations, and a description of how the proposed monitoring will evaluate the effectiveness of the chosen BMP and provide information to improve the collective understanding of how the chosen BMP should be installed and maintained over time.

The Water Board Executive Officer will review submitted monitoring plans to ensure that proposed monitoring will meet the requirements outlined in Sections III.A and III.B above. Each Permittee's submitted monitoring plan needs to be approved by the Water Board Executive Officer in order for the Permittee to be in compliance with this Permit.

D. Storm~~w~~ Water Monitoring Data Management

Electronic data shall be in a format compatible with the Surface Water Ambient Monitoring Program (SWAMP) database (See <http://mpsl.miml.calstate.edu/swdataformats.htm>). Permittees shall maintain an information management system that will support electronic transfer of data to the Regional Data Center of the *California Environmental Data Exchange Network (CEDEN)*.

Permittees shall make electronic reports available through a regional data center, and optionally through their web sites. Permittees shall notify stakeholders and members of the general public about the availability of electronic and paper monitoring reports through notices distributed through appropriate means, such as an electronic mailing list.

E. Storm~~w~~ Water Monitoring Compliance Options

To promote cost savings through economies of scale and avoid monitoring redundancy, Permittees may obtain monitoring data through various organizational structures, including use of data obtained by other parties.

Permittees may also choose to comply with the storm~~w~~ water monitoring requirements through a collaborative effort. Should the Permittees chose to conduct monitoring described in Sections III.A and III.B above as part of a collaborative effort, the group may submit a single storm~~w~~ water monitoring plan to fulfill the requirement contained in Section III.C above.

Any collaborative monitoring plan shall include plans to collect samples from no less than four (4) urban catchments and evaluate performance of no less than two (2) BMPs. Selected catchments shall represent a range of urban land use condition, size, maintenance practices, and other relevant variables to avoid overlap in collected monitoring data. Similarly, selected BMPs must reflect differing treatment processes and treatment approaches implemented by the Permittees to provide a range of useful monitoring findings. The submitted monitoring plan shall describe how the proposed collaborative effort will effectively enhance the usefulness of collected data, achieve cost savings, and meet the requirements outlined in Sections III.A and III.B above.

For each monitoring component that is conducted collaboratively, Permittees shall prepare a single report on behalf of all contributing Permittees; separate water quality monitoring reports are not required.

If an existing collaborative organization or other research and monitoring effort has initiated plans before the adoption of this Permit to conduct monitoring that would fulfill the requirements described in Sections III.A, III.B, and III.C above, the Permittees may request the Water Board adjust monitoring and reporting dates to synchronize with such efforts.

#### IV. Annual Reporting Requirements

For each water year (October 1-September 30), Permittees shall develop and submit an Annual Report no later than **March 15** of each year of the permit term, and shall include the following elements:

**Comment [adw8]:** First one due March 15 2012 or 2013? Specify.

##### A. Pollutant Load Reduction Reporting

Each Permittee must describe actions taken to fulfill the requirements of Monitoring and Reporting Section I. Specifically, each Permittee's annual report must include a list of catchments registered in the Accounting and Tracking Tool and a summary of applicable condition assessment results for all registered catchments pursuant to Section I.D above.

Each Permittee shall list its total credit award as of March 15 each year to demonstrate progress at meeting the requirement to reduce fine sediment particle loading by 10 percent of each jurisdictions' established baseline load as described by Table I.B above.

Each Permittee shall describe load reduction progress in context of its Pollutant Load Reduction Plan (PLRP), including a discussion of whether catchment registration, associated load reduction estimates, and implementation actions are consistent with the submitted and accepted PLRP.

Each Permittee shall provide a statement confirming compliance with Permit Section IV.D. The statement shall include a summary of development and or redevelopment projects permitted by the Permittee during the previous water year and confirmation that any change in pollutant loading has been documented by registering the applicable catchment in the Crediting Program.

**Comment [adw9]:** Must the permittees register all catchments where there are land-disturbing activities? If so, this should be included as an explicit requirement in the permit (presumably under Section IV.D).

##### B. Storm ~~w~~Water Facilities Inspection Report

The annual report shall include a summary report of all storm water facility inspections performed pursuant to Section I.A of this Monitoring and Reporting Program. The report shall include a list of all areas inspected, a description of identified pollutant sources and/or problem areas, and any

planned or completed maintenance and/or enforcement follow up activities.

C. Construction Site Inspection Report

The annual report shall include a detailed summary report of all construction inspections performed pursuant to Section II.B of this Monitoring and Reporting Program. The summary report shall include a list of all construction sites inspected, a description of identified problems, and any planned or completed enforcement follow up activities.

D. Commercial, Industrial, and Municipal Site Inspection Report

The annual report shall include a detailed summary report of all commercial, industrial, and municipal site inspections performed pursuant to Section II.C of this Monitoring and Reporting Program. The summary report shall include a list of all commercial, industrial, and municipal sites inspected, a description of identified problems, and any planned or completed enforcement follow up activities.

~~ED.~~ Traction Abrasive and Deicing Material Report

The annual report shall include a summary report of the monitoring data collected pursuant to Section II.~~DE~~ of this Monitoring and Reporting Program.

~~EE.~~ Storm~~w~~ Water Monitoring Report

Each Permittee shall ~~annually~~ submit by March 15 of each year of the permit term a comprehensive electronic report ~~summarizing the including items 1-12 below previous water year (October 1 – September 30)~~ and cumulative storm water monitoring results from the catchment load monitoring and BMP effectiveness evaluations during the previous water year (October 1 – September 30).

If Permittees are working collaboratively to meet the requirements specified in Section III of this Monitoring and Reporting Program, a single report for participating Permittees will be accepted.

The storm~~\_~~water monitoring report shall include, at a minimum, the following:

1. A discussion of monitoring purpose and study design rationale.
2. Details of the data collection methods, sampling protocols and analytical methods including detection limits.
3. Quality Assurance/Quality Control summaries.
4. Maps and descriptions of all monitoring locations including latitude and longitude coordinates and data obtained at each location.

5. Raw analytical data that includes sample identification, collection date, time and analytical reporting results for all collected samples.
6. Documentation of data management procedure.
7. Details of data analysis, calculations and assumptions to obtain results and draw conclusions.
8. Catchment outlet monitoring - data tables and graphical data summaries that include seasonal total volume (cubic feet), seasonal average concentrations (milligrams/liter and number of particles/liter) and load (kilograms and number of particles) of each pollutant outlined in section III.A.4 [of this Monitoring and Reporting Program](#). For long-term catchment monitoring, provide recent data in context with cumulative comparable results from previous years, noting trends. Consider the season type ([very wet](#), [wet](#), [average](#), [dry](#), [averagevery dry](#), [ete](#)) for each seasonal data point when evaluating trends and inter-annual variability in catchment results.
9. For flow-through BMPs - data tables and graphical data summaries of seasonal volume (cubic feet), average inlet and outlet pollutant concentrations (milligrams/liter and number of particles/liter) and pollutant loads (kilograms and number of particles) for each pollutant outlined in section III.B.4. Permittees shall report the seasonal storm water volume (cubic feet) and pollutant load reduced (kilograms and number of particles) for each pollutant for each season of measure.
10. For hydrologic or pollutant source control BMPs - data tables and graphical summaries of seasonal storm water volumes (cubic feet) (hydrologic source control) as a result of the BMP implementation and maintenance or seasonal pollutant mass (kilograms and number of particles) reduced over the area of land surface subject to the chosen BMP for all each pollutant described in Section III.B.4. For multi-year BMP evaluations, provide recent data in context with cumulative comparable results from previous years, noting trends.
11. An assessment of annually collected data in the context of the water year type ([very wet](#), [wet](#), [average](#), [dry](#), [very dry](#)) using the regional meteorological analysis and provide interpretation of this data relative to average annual estimates.
12. A discussion lessons learned from storm water monitoring efforts including, but not limited to, catchment water quality improvement strategies, pollutant sources analyses, pollutant fate and transport within sampled catchments, BMP design and/or implementation improvements, and maintenance strategy effectiveness (including techniques or frequency).

#### F.G. Illicit Discharge Report

To assess compliance with Permit Sections I.A and III.B.5 each Permittee shall annually submit a report describing actions taken to prevent unauthorized non-storm water discharges and report any identified illicit discharges to its collection, conveyance, and treatment facilities. The report shall include a description of any education, outreach, or inspection

activities conducted pursuant to Permit Sections III.B.1, III.B.2, III.B.3 and III.B.4 that support the Permittee's program to prohibit unauthorized non-storm\_water discharges.

H. Education Component

Permittees shall summarize all training and education activities during the previous year, including a list of all educational materials distributed and trainings provided to the public, to municipal employees, and to construction, commercial, industrial, or municipal site operators.

G-I. Provisions

Permittees shall comply with the "General Provisions for Monitoring and Reporting" dated September 1, 1994 that is attached to and made part of this Monitoring and Reporting Program.

Formatted: Bullets and Numbering