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STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

ORDER NO. R6T-2011-101A1
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

FINDINGS

The California Regional Water Quality Control Board, Lahontan Region (hereinafter referred to as the Water Board) finds that:

A. Discharger Information and Permit History

1. The City of South Lake Tahoe (City), El Dorado County, and Placer County discharge storm water/urban runoff to surface waters of the Lake Tahoe Hydrologic Unit (LTHU). These discharges occur within various hydrologic sub-areas (watersheds) throughout the LTHU. The City, El Dorado County, and Placer County are considered Co-Permittees under this National Pollutant Discharge Elimination System (NPDES) Permit and are referred to collectively as "Permittees".
2. These Updated Waste Discharge Requirements and NPDES Permit for Storm Water/Urban Runoff Discharges from El Dorado County, Placer County, and the City of South Lake Tahoe will be referred to throughout this Order as the "Permit."
3. Prior to issuance of this Permit, storm water discharges from the Permit Area were covered under Order No. R6T-2005-0026, adopted by the Water Board on October 12, 2005, which replaced Order No. 6-00-82, adopted by the Regional Water Board on October 12, 2000.
4. The Permittees submitted Reports of Waste Discharge in April 2010 requesting renewal of waste discharge requirements under the NPDES program to permit storm water discharges from municipal storm collection, conveyance, and treatment facilities within their jurisdictions.

B. Permit Area

1. The jurisdictional areas of the City, El Dorado County, and Placer County that fall within the LTHU are considered the "Permit Area." The Permittees are responsible for all storm water/urban runoff discharges in the Lake Tahoe watershed within the LTHU of their respective City and Counties.
2. Federal, state, regional, or local entities within the Permittees' jurisdictional boundaries and not currently named in this Permit may operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters covered by this NPDES Permit. The Permittees may lack legal jurisdiction over these entities under State and Federal constitutions.

The Water Board will coordinate with these entities not named in this Permit that operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters covered by this NPDES Permit to implement programs that are consistent with the requirements of this Permit.

3. Permittees should work cooperatively to control the contribution from pollutants from one jurisdiction to an adjacent jurisdiction through inter-agency agreements or other formal arrangements.

C. Nature of Discharge

1. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California. Urban runoff contains wastes, as defined in the California Water Code, and pollutants, as defined in the federal Clean Water Act (CWA), and adversely affects the waters of the State and their designated beneficial uses. The most common pollutant categories in urban runoff within the LTHU include total suspended solids, sediment (due to anthropogenic activities); pathogens (e.g., bacteria, viruses, protozoa); nutrients (e.g., nitrogen and phosphorus); oxygen demanding substances (decaying vegetation, animal waste); oil, grease, and other petroleum hydrocarbons; and trash. In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems.
2. In addition, the high volumes and high velocities of storm water discharged from municipal separate storm sewer systems (MS4s) into receiving waters can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed "hydromodification".

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3. Lake Tahoe's deep water transparency, as measured by the Secchi disk, has been declining since transparency measurement began in the late 1960's. The Lake Tahoe TMDL Report (November 2010) identifies elevated levels of very fine sediment (particles less than 16 microns) and increased algal growth rates as the causes of transparency loss. Consequently, the primary pollutants of concern for storm water treatment in the LTHU are the number of fine sediment particles (less than 16 microns) and the mass of nutrients that support algal growth (nitrogen and phosphorus).
4. One of the leading sources of very fine sediment particles is roadways. To enhance the safety of motorists in the winter months, the Permittees' winter roadway operations include the application of traction abrasive and deicing materials. If not properly applied and recovered, traction abrasives can be a significant source of the pollutants of concern.
5. Storm water runoff within the Permittees jurisdiction generally flows into pipes and open channels and often passes through pretreatment vaults, treatment basins, and other treatment structures before being discharged to surface waters or land. This Permit describes all storm water management infrastructure maintained by the Permittees as "collection, conveyance, and treatment facilities". For purposes of this Permit, collection, conveyance, and treatment facilities are synonymous with "municipal separate storm sewer systems" or MS4s.

D. Federal, State and Regional Regulations

1. The Water Quality Act of 1987 added § 402(p) to the CWA(33U.S.C. § 1251-1387). This section requires the United States Environmental Protection Agency (U.S. EPA) to establish regulations setting forth NPDES requirements for storm water discharges in two phases.
 - a. U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, and storm water discharges associated with ten categories of industrial activities, including construction activities disturbing more than five acres. In addition, municipalities whose storm water discharges contribute to violations of water quality standards or is a signification contributor of pollutants to waters of the United States may also be issued a NPDES permit under Phase I. Consequently, some MS4s that serve a population below 100,000, such as the Permittees, were brought into the Phase I program by NPDES permitting authorities. The Phase 1 regulations were published on November 16, 1990 (55 Fed. Reg. 47990).

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- b. U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (population of less than 100,000) in urbanized areas, small construction projects (less than five acres, but greater than one acre), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the U.S. The Phase II Final Rule was published on December 8, 1999 (64 Fed. Reg. 68722).
2. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is an authorized State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of wastes that could affect the quality of waters of the State, including waters of the United States, and tributaries thereto.
3. Under CWA § 303(d), States are required to identify a list of impaired water bodies and develop and implement Total Maximum Daily Loads (TMDLs) for these waterbodies (33 USC § 1313(d)(1)). Lake Tahoe is listed on the CWA § 303(d) impaired water bodies list. On November 16, 2010 the Water Board adopted an amendment to its Water Quality Control Plan (Basin Plan) to incorporate a TMDL for Lake Tahoe. The amendment was approved by the State Water Board on April 19, 2011 and the TMDL was approved by the U.S. EPA on August 17, 2011. The Basin Plan amendment established pollutant load reduction requirements for urban storm water discharges for fine sediment particles, total nitrogen, and total phosphorus. Section IV of this Permit incorporates approved load reduction requirements as effluent limits for municipal storm water discharges in the LTHU and requires the preparation of Pollutant Load Reduction Plans (PLRPs) to meet established waste load reduction requirements.
4. This Permit does not constitute an unfunded local government mandate subject to subvention under Article XIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following.

First, this Permit implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B)(33 U.S.C. § 1342(p)(3)(B)). This includes federal requirements to effectively prohibit non-storm water discharges and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. The authority exercised under this Permit is not reserved state authority

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under the CWA's savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, this Permit implements federally mandated requirements under 303(d) of the CWA and section 122.44(d)(1)(vii)(B) of the Code of Federal Regulations. Specifically, the provisions of this Permit to implement the Lake Tahoe TMDL are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable waste load allocation. (40 CFR 122.44(d)(1)(vii)(B)).

Second, the Permittees' obligations under this Permit are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the California Water Code regulates the discharge of waste (Water Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding that comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the California Water Code largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Permit does not require strict

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compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Permit, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4th 1351, 1358-1359.). The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested Permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)). To the extent that the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) The local agencies' voluntary decision to file a report of waste discharge proposing a program based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the Permittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

5. The Water Board adopted a Basin Plan for the Lahontan Region on March 31, 1995. The Basin Plan specifies the beneficial uses of water bodies within the LTHU and contains both narrative and numerical water quality objectives for these waters. The following beneficial uses identified in the Basin Plan apply to all watersheds covered by this Permit:
 - a. Municipal and domestic supply,
 - b. Agricultural supply,
 - c. Water contact recreation,
 - d. Non-contact water recreation,
 - e. Groundwater recharge,
 - f. Freshwater replenishment,
 - g. Navigation,
 - h. Commercial and sport fishing,
 - i. Cold freshwater habitat,
 - j. Wildlife habitat,

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- k. Preservation of biological habitats of special significance,
 - l. Rare, threatened, or endangered species,
 - m. Migration of aquatic organisms,
 - n. Spawning, reproduction, and development,
 - o. Water quality enhancement, and
 - p. Flood peak attenuation/flood water storage
6. State Water Board Resolution No. 68-16 contains the state Antidegradation Policy, titled "Statement of Policy with Respect to Maintaining High Quality Waters in California" (Resolution 68-16), which applies to all waters of the state, including ground waters of the state, whose quality meets or exceeds (is better than) water quality objectives. Resolution No. 68-16 is considered to incorporate the federal Antidegradation Policy (40 CFR131.12) where the federal policy applies, (State Water Board Order WQO 86-17). Administrative policies that implement both federal and state antidegradation policies acknowledge that an activity that results in a minor water quality lowering, even if incrementally small, can result in violation of Antidegradation Policies through cumulative effects, for example, when the waste is a cumulative, persistent, or bioaccumulative pollutant.

Federal Antidegradation Policy (40 CFR131.12) states that the State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:

- a. Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- b. Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully.
- c. Where high quality waters constitute an outstanding National resource, including waters of exceptional recreational or ecological significance like Lake Tahoe, that water quality shall be maintained and protected.

The proposed Permit requirements are consistent with both state and federal antidegradation policies. Permittees storm water management and PLRP actions will reduce pollutant loading to Lake Tahoe consistent with established TMDL requirements to maintain and improve water quality.

7. The requirements in this Permit may be more specific or detailed than those enumerated in federal regulations under 40 CFR122.26 or in U.S. EPA guidance. However, the requirements have been designed to implement and be consistent with the federal statutory mandates described in CWA § 402(p)(3)(B)(ii) and (iii) and the related federal regulations. Consistent with federal law, all of the conditions in this Permit could have been included in a permit adopted by U.S. EPA in the absence of the in lieu authority of California to issue NPDES permits.

E. Storm Water Management Plans

1. The 2005 permit (Order R6T-2005-0026) required the Permittees to develop and implement comprehensive, activity-based storm water management programs that include construction, commercial, industrial, and residential site controls coupled with a facilities inspection program and thorough public outreach and education plans. Each Permittee prepared and submitted detailed Storm Water Management Plans (SWMPs) as required.
2. The current SWMPs provide many of the necessary elements for the Permittees' storm water programs. It will be necessary for the Permittees to update and re-submit their current SWMPs to incorporate all requirements in Section III.B of this Permit, and to reflect current conditions and planned activities.

F. Total Maximum Daily Loads – Lake Tahoe

1. On November 16, 2010 the Water Board adopted Resolution R6T-2010-0058, amending the Basin Plan to incorporate the TMDL for sediments and nutrients for Lake Tahoe to restore Lake Tahoe to meet the water quality objective for the lake's deep water transparency. The TMDL identified pollutant loads by source category, set load allocations at a basin-wide scale, and identified an implementation plan for restoring Lake Tahoe's deep water transparency.
2. The approved Basin Plan amendment requires the Permittees and the California Department of Transportation (CalTrans) to meet pollutant load reduction requirements specified by the Lake Tahoe TMDL. Pollutant load allocation tables are included in Attachment B of this Permit. The Basin Plan acknowledges that these agencies will likely consider a variety of alternative treatment options, roadway operations

practices, and local ordinances to reduce average annual pollutant loads to meet load reduction requirements.

3. The Permit incorporates numeric and narrative effluent limitations consistent with 40 CFR 122.44(d) that implement the Lake Tahoe TMDL pollutant load reduction requirements. The approved Basin Plan amendment replaces some of the concentration-based storm water effluent limits with effluent limits expressed as annual average pollutant load reduction requirements for the primary pollutants of concern. The Basin Plan eliminated the application of the concentration-based limit for oil and grease to municipal runoff in deference to the Basin Plan's more stringent receiving water limit. Similarly, the Basin Plan removed the concentration-based iron limit because there is no evidence indicating that urban runoff is a source of iron.
4. The Basin Plan amendment and the Lake Tahoe TMDL require Lake Tahoe basin municipalities and the CalTrans to develop and implement comprehensive PLRPs to describe how proposed operations and maintenance activities, capital improvements, facilities retrofit projects, ordinance enforcement, and other actions are expected to meet required pollutant load reduction requirements. PLRPs provide the Permittees the opportunity to prioritize pollutant load reduction efforts and target sub-watersheds that generate the highest annual average pollutant loads.
5. Permittees have primarily relied upon state and federal grant sources to fund water quality improvement infrastructure programs and generally use in-house resources for water quality operations and maintenance practices. As of November 2011 there are fewer grant funds available and economic conditions have negatively impacted local government budgets. Consequently, Permittees will need to effectively prioritize future infrastructure and operations and maintenance actions to maximize pollutant load reductions that can be achieved with available funding.
6. The Water Board developed the Lake Clarity Crediting Program (see Attachment D of this Permit) to establish protocols for accounting and tracking pollutant load reductions within the urban environment.
7. The Lake Tahoe TMDL baseline pollutant loading and load reduction requirements are provided as average annual estimates. For consistency with the TMDL requirements, the Lake Clarity Crediting Program uses average annual pollutant load estimates generated by numeric models. Verification of field conditions and water quality monitoring are needed to ensure that on-the-ground, measured variables are in line with model input parameters and that measured pollutant loading is consistent with modeled estimates.

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8. On February 9, 2011 the Water Board Executive Officer issued the Permittees and CalTrans an Order to submit technical reports in accordance with California Water Code Section 13267 requiring the development of jurisdiction-specific baseline load estimates for the Lake Tahoe TMDL pollutants of concern. The submitted baseline pollutant load estimates provide the basis for translating percentage based pollutant load reduction requirements defined by the TMDL into jurisdiction-specific, particle and mass-based pollutant load reduction requirements.
9. The Lake Tahoe TMDL requires new development and re-development project proponents and private property retrofit efforts to first consider opportunities to infiltrate storm water runoff from impervious surfaces. At a minimum, permanent storm water infiltration facilities must be designed and constructed to infiltrate runoff generated by the 20 year, 1-hour storm, which equates to approximately one inch of runoff over all impervious surfaces during a 1-hour period. Infiltrating runoff volumes generated by the 20 year, 1-hour storm may not be possible in some locations due to shallow depth to seasonal groundwater levels, unfavorable soil conditions, or other site constraints such as existing infrastructure or rock outcroppings. In the event that site constraints prohibit opportunities to infiltrate the runoff volume generated by a 20 year, 1-hour storm, project proponents must either (1) meet the numeric effluent limits contained in Basin Plan Table 5.6-1, or (2) document coordination with one of the Permittees or CalTrans to demonstrate that storm water treatment facilities treating private property discharges and public right-of-way storm water are sufficient to meet the Permittees' or CalTrans' average annual fine sediment and nutrient load reduction requirements.
10. The Basin Plan amendment and the Lake Tahoe TMDL requires municipalities to annually demonstrate on a catchment (i.e. sub-watershed) basis that no increased loading in fine sediment particle, total nitrogen, and total phosphorus will result from any land-disturbing activity permitted in the catchment. The Permit includes a narrative effluent limitation to implement this provision.
11. The Basin Plan amendment acknowledges a decline in nearshore water quality as evidenced by increased growth of attached algae. Pollutant load reduction actions taken to implement the Lake Tahoe TMDL, including pollutant load reductions required by this Permit, are anticipated to improve the nearshore environment by decreasing pollutant loads entering the lake. Additional analysis, however, is needed to quantify this benefit and to determine if additional resource management actions are needed to address the nearshore water quality problems. Such analysis is beyond the scope of this Permit.

12. The Basin Plan amendment recognizes the need for a comprehensive program to adaptively manage the Lake Tahoe TMDL program. Future research and monitoring findings, coupled with implementation experience and fiscal realities, may cause the Water Board to revisit the Lake Tahoe TMDL and associated regulatory activities. The Lake Tahoe TMDL Management System will provide the framework for synthesizing and reporting new information and for identifying the need for policy changes.

The Basin Plan amendment further acknowledges the need for adaptive management of the Lake Tahoe TMDL program by explicitly stating “should funding and implementation constraints impact the ability to meet the load reduction milestones, the Water Board will consider amending the implementation plan and load reduction schedules.”

This Permit requires the Permittees to develop PLRPs (Section IV.C) and conduct a fiscal analysis (Section III.B.8) within the first two years of this Permit term. The information provided in these reports, or from other relevant sources, may provide the rationale for future modifications to the Basin Plan load reduction schedules and associated Permit requirements.

G. Public Notification

1. The issuance of waste discharge requirements pursuant to California Water Code section 13370 et seq. is exempt from the California Environmental Quality Act in accordance with California Water Code section 13389. *County of Los Angeles et al., v. California Water Boards et al.*, (2006), 143 Cal.App.4th 985.
2. The Water Board has notified the Permittees, and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to make statements and submit their comments.
3. This Permit shall serve as a NPDES permit, pursuant to CWA § 402, and shall take effect 90 days from Order adoption date provided the Regional Administrator of the U.S. EPA has no objections.
4. Pursuant to California Water Code § 13320, any aggrieved party may seek review of this Permit by filing a petition with the State Board within 30 days of the date of adoption of the Permit by the Regional Water Board. A petition must be sent to:

State Water Resources Control Board
Office of the Chief Counsel
P.O. Box 100
Sacramento, CA 95812-0100

5. This Permit may be modified or alternatively revoked or reissued prior to its expiration date or any administrative extension thereto, in accordance with 40 CFR 122.41(f) and 122.62.

IT IS HEREBY ORDERED that Order No. R6T-2005-0026 is rescinded, and in order to meet the provisions contained in Division 7 of the Cal. Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, the Permittees shall comply with the following:

I. Non-Storm Water Discharges

- A. The Permittees shall, within their respective jurisdictions, effectively prohibit non-storm water discharges into its collection, conveyance, and treatment facilities and receiving waters, except where such discharges:
 1. Originate from a State, Federal, or other source for which they are preempted from regulating by State or Federal law; or
 2. Are covered by a separate individual or general NPDES permit, or conditional waivers; or
 3. Flows from firefighting activities.
- B. Pursuant to 40 CFR 122.26(d)(2)(iv)(B)(1) the following categories of non-storm water discharges need only be prohibited from entering the Permittees storm water collection, conveyance, and treatment facilities and receiving waters if such categories of discharges are identified by the Permittee (in its SWMP) as a source of pollutants to waters of the United States and the State of California:
 1. Waterline flushing
 2. Landscape irrigation
 3. Diverted stream flows
 4. Rising groundwater
 5. Uncontaminated groundwater infiltration [as defined by 40 CFR 35.2005(20)]
 6. Uncontaminated pumped groundwater
 7. Discharges from potable water sources
 8. Fountain drains
 9. Air conditioning condensation
 10. Irrigation water
 11. Springs
 12. Water from crawl space pumps
 13. Footing drains
 14. Lawn watering
 15. Individual residential car washing
 16. Flows from riparian habitats and wetlands
 17. Dechlorinated swimming pool and spa discharges

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- C. When a non-storm water discharge category listed above is identified as a source of pollutants to waters of the State, Permittees shall either:
1. Prohibit the discharge category from entering its storm water collection, conveyance, and treatment system; or
 2. Authorize the discharge category and require implementation of appropriate or additional Best Management Practices to ensure that the discharge will not be a source of pollutants; or
 3. Require or obtain coverage under separate Regional or State Water Board permit for the discharge.

II. Other Prohibitions

- A. Unless specifically granted, authorization pursuant to this Permit does not constitute an exemption to applicable discharge prohibitions prescribed in the Basin Plan.
- B. Discharges from the Permittees' collection, conveyance, and treatment facilities that cause or contribute to a violation of narrative or numeric water quality standards or objectives, as listed in Attachment E and F, are prohibited.
- C. Discharges from the Permittees' collection, conveyance, and treatment facilities shall not cause or contribute to a condition of nuisance.
- D. Storm water discharges regulated by this Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.
- E. The removal of vegetation or disturbance of ground surface conditions between October 15 of any year and May 1 of the following year is prohibited. Where it can be shown that granting a variance would not cause or contribute to the degradation of water quality, a variance to the dates stated above may be granted in writing by the Executive Officer.
- F. Discharge of any waste or deleterious material to surface waters of the LTHU is prohibited.
- G. The discharge, or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand, and other organic and earthen materials to the surface waters of the LTHU is prohibited.

- H. The discharge or threatened discharge, attributable to human activities, of solid or liquid waste materials, including soil, silt, clay, sand and other organic and earthen materials, to lands below the high-water rim of Lake Tahoe or within the 100-year floodplain of any tributary to Lake Tahoe, is prohibited.
- I. The discharge or threatened discharge, attributable to new development in Stream Environment Zones, of solid or liquid waste, including soil, silt, sand, clay, rock, metal, plastic, or other organic, mineral or earthen materials to Stream Environment Zones in the LTHU is prohibited.
- J. Waste discharge prohibitions in this Section do not apply to discharges of storm water when wastes in the discharge are controlled through the application of management practices or other means and the discharge does not cause a violation of water quality objectives.

III. Storm Water Program Implementation

A. Legal Authority

- 1. No later than **March 15, 2013**, Permittees shall establish, maintain, and enforce the necessary legal authority to prohibit, including, but not limited to:
 - a. Illicit connections and illicit discharges to its collection, conveyance, and treatment facilities,
 - b. The discharge of non-storm water to the Permittees' storm water collection, conveyance, and treatment facilities². Permittees shall maintain adequate legal authority to:
 - a. Control through interagency agreement, the contribution of pollutants from one municipal jurisdiction to another
 - b. Require persons within their jurisdiction to comply with conditions in the Permittees' ordinances, permits, or orders (i.e. hold dischargers to its collection, conveyance, and treatment facilities accountable for their contributions of pollutants and flows)
 - c. Remove illicit connections to public storm water collection, conveyance, and treatment facilities
 - d. Control the discharge of spills, dumping, or material disposal other than storm water to public storm water collection, conveyance, and treatment facilities
 - e. Utilize enforcement measures (e.g., stop work orders, notice of violations, fines, referral to City, County, and/ or District Attorneys,

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etc.) by ordinances, permits, contracts, orders, administrative authority, and civil and criminal prosecution

- f. Control the quality of storm water runoff from industrial and construction sites
 - g. Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges.
 - h. Require the use of control measures to prevent or reduce the discharge of pollutants to the maximum extent practicable.
3. No later than **March 15, 2012** each Permittee shall submit a statement certified by its legal counsel as to whether or not the Permittee possesses the legal authority necessary to comply with this Permit. If the Permittee finds that it does not have the necessary legal authority, the statement must identify specific deficiencies.

No later than **March 15, 2013** each Permittee shall submit a statement certified by its legal counsel that the Permittee possesses all necessary legal authority to comply with this Permit through adoption of ordinances and/ or municipal code modifications. The statement shall include:

- a. Identification of all departments within the jurisdiction that conduct urban runoff related activities and their roles and responsibilities under this Order.
- b. Citation of urban runoff related ordinances and the reasons they are enforceable.
- c. Identification of the local administrative and legal procedures available to mandate compliance with urban runoff related ordinances.
- d. Description of how these ordinances or other legal mechanisms are implemented and actions taken can be appealed.
- e. Description of how the municipality can issue administrative orders and injunctions, or if it must go through the court system for enforcement actions.

B. Storm Water Management Plans

Federal Regulations (40 CFR 122.26(d)(2)(iv)) require the Permittees to develop and implement a SWMP during the term of this Order. Each Permittee shall amend its SWMP to include components 1-9 below.

Permittees shall submit amended SWMPs for Water Board consideration no later than **October 1, 2013**. The Water Board will circulate the amended SWMPs for public comment and will consider accepting them at a publicly noticed meeting.

If no hearing for SWMP acceptance is requested during the public comment period, the Executive Officer may accept the amended SMWPs.

1. Construction Component

Each Permittee shall implement a Construction Component of its SWMP to reduce pollutants in runoff from construction sites that involve more than three cubic yards of soil disturbance during all construction phases. The SWMP shall include a description of procedures for identifying inspection priorities and enforcing control measures. At a minimum the construction component plan shall address the following:

a. Construction Site Inventory

Permittees shall develop and update, at least annually, a complete inventory of construction sites within its jurisdiction that involve more than three cubic yards of soil disturbance. This requirement is applicable to all construction sites regardless of whether the construction site is subject to the General Construction Permit (Order R6T-2011-0019). The use of a Geographical Information System (GIS) database is highly recommended, but not required.

b. Construction Site Outreach

Permittees shall conduct construction site outreach efforts that include, at a minimum, measures to educate construction site operators about local ordinance and other regulatory requirements and applicable enforcement mechanisms prior to construction commencement.

c. Construction Site Prioritization and Inspection

Permittees shall develop a prioritization process for its watershed-based inventory (developed pursuant to III.B.1.a above) by threat to water quality. Each construction site shall be classified as a high, medium, or low threat to water quality. In evaluating threat to water quality each Permittee shall consider (1) the magnitude of fine sediment particle discharge potential; (2) site slope; (3) project size and type; (4) stage of construction; (5) proximity and connectivity to receiving water bodies; and (6) any other factors the Permittee deems relevant.

Each Permittee shall conduct construction site inspections for compliance with its ordinances (grading, storm water, etc.), permits (construction, grading, etc.), and discharge prohibitions contained in this Permit in accordance with Section II.B of the Monitoring and Reporting Program (Attachment C). Inspections shall include review of site erosion control and BMP implementation plans. Inspection frequencies and priorities shall be determined by the threat to water quality prioritization.

During the construction season (May 1 through October 15 of each year), each Permittee shall inspect each high priority construction site and all construction projects overseen by the Permittee (e.g. erosion control and storm water treatment projects) at least once per week. Each Permittee shall inspect medium and low priority construction sites at a frequency sufficient to ensure that sediment and other pollutants are controlled and that unauthorized non-storm water discharges are prevented.

d. Construction Site Enforcement

Permittees shall enforce their storm water ordinances and other regulatory mechanisms for all construction sites to maintain compliance with local ordinances and discharge prohibitions contained in this Permit. Permittees shall document any non-compliance with Permit or ordinance requirements and report identified compliance issues as part of their Annual Report as described under Section IV.C of the Monitoring and Reporting Program (Attachment C).

Each Permittee shall follow up on identified compliance issues and take actions necessary for construction sites to comply with Permit requirements.

e. Oversight by Others

Permittees may make use of construction site outreach, inspection, and enforcement actions taken by other responsible agencies (such as the Tahoe Regional Planning Agency (TRPA) or the Water Board). If a Permittee chooses to use the efforts of other agencies to meet Permit requirements, Permittees must provide detailed documentation of the outreach, inspection, and/or enforcement action taken by others.

2. Commercial, Industrial, Municipal and Residential Component

Each Permittee shall implement SWMP elements to reduce, to the maximum extent practicable, pollutants in runoff from commercial, industrial, municipal, and residential properties within its jurisdiction. The purpose of this Component is to identify potential pollutant sources, prioritize existing or potential water quality threats associated with different land uses, and provide outreach, education, and enforcement measures to reduce and/or eliminate storm water pollution from these sources.

a. Commercial, Industrial, and Municipal Site Inventory and Prioritization

Each Permittee shall develop and annually update an inventory of high priority commercial, industrial, and municipal activities and pollutant sources. The high priority commercial, industrial, and municipal site inventory shall consider including the following business types and activities:

- (1) Automobile mechanical repair, maintenance, or cleaning;
- (2) Automobile and other vehicle body repair or painting;
- (3) Retail or wholesale fueling;
- (4) Eating or drinking establishments;
- (5) Mobile carpet, drape or furniture cleaning;
- (6) Concrete mixing or cutting;
- (7) Painting and coating;
- (8) Mobile pool and spa cleaning;
- (9) Snow removal and storage activities;
- (10) Parking areas with more than 30 parking spaces;
- (11) Off-pavement parking and storage yards;
- (12) Municipal maintenance yards.

The use of a GIS database is highly recommended, but not required.

b. Commercial, Industrial, and Municipal Site Outreach

Permittee outreach efforts shall include, at a minimum, educating commercial, industrial, and municipal site operators about local ordinances and other regulatory measure and associated tiered enforcement mechanisms applicable to commercial, industrial, or municipal site runoff problems.

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c. Commercial, Industrial, and Municipal Site Inspections

Each Permittee shall implement a program to inspect high priority commercial, industrial, and municipal sites at least once per year in accordance with Section II.C of the Monitoring and Reporting Program (Attachment C).

d. Commercial, Industrial, and Municipal Site Enforcement

Permittees shall enforce their storm water ordinances and other regulatory mechanisms for all commercial, industrial, and municipal sites to maintain compliance with applicable local ordinances and discharge prohibitions contained in this Permit. Permittees shall document any non-compliance with ordinance and/or Permit requirements and report inspection findings as part of their Annual Report as described under Section IV.D of the Monitoring and Reporting Program (Attachment C).

Each Permittee shall follow up on inspection findings and take actions necessary for commercial, industrial, and municipal sites to comply with Permit and local ordinance requirements.

e. Oversight by Others

Permittees may make use of commercial and industrial site outreach, inspection, and enforcement actions taken by other responsible agencies (such as the TRPA or the Water Board). If a Permittee chooses to use the efforts of other agencies to meet Permit requirements, Permittees must provide detailed documentation of the outreach, inspection, and/or enforcement action taken by others.

f. Residential Property – Outreach and Education

Each Permittee shall identify high priority residential areas and activities for targeted outreach and education. These areas/activities should include:

- (1) Automobile repair and maintenance;
- (2) Off-pavement automobile parking;
- (3) Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- (4) Disposal of household hazardous waste (e.g., paints, cleaning products);
- (5) Snow removal activities

Permittees shall develop and implement a program to target education and outreach efforts toward identified high priority activities. Such outreach program should include coordination with other Lake Tahoe Basin agencies involved with BMP implementation, including but not limited to the Tahoe Resource Conservation District and the TRPA Erosion Control Team.

3. Storm Water Facilities Inspection Component

Each Permittee shall develop and implement an inspection program to assess the condition of its storm water collection, conveyance and treatment facilities and maintenance needs on a catchment, or sub-watershed basis in accordance with the following requirements, and Section II.A of the Monitoring and Reporting Program (Attachment C).

- a. By the end of the Permit term, each Permittee shall develop and maintain an up-to-date and accurate system map of its collection, conveyance, and treatment facilities.
- b. Each Permittee shall inspect its storm water collection, conveyance and treatment systems at least once annually and maintain a database of inspection findings.
- c. As part of its storm water collection, conveyance, and treatment system inspections, each Permittee shall evaluate and identify potential pollutant sources including but not limited to: private property/residential runoff, commercial site runoff, eroding cut slopes, eroding road shoulders, intercepted groundwater discharges, excessive traction abrasive application, and construction site tracking.
- d. Each Permittee shall document and prioritize identified maintenance needs and perform needed maintenance to ensure storm water systems effectively collect, convey, and treat urban runoff as designed.

4. Illicit Discharge Detection and Elimination Component

Permittees shall implement an Illicit Discharge Detection and Elimination Component containing measures to actively seek and eliminate illicit discharges and connections. At a minimum the Illicit Discharge Detection and Elimination Component shall include the following elements:

- a. Each Permittee shall visually inspect all storm water collection, conveyance, and treatment systems at least once annually as described in Section II.A of the Monitoring and Reporting Program (Attachment C) for evidence of illicit discharges, illicit connections, or other sources of non-storm water discharges.

- b. Each Permittee shall establish and implement a program to investigate and inspect any portion of the storm water collection and conveyance system that indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water. Each Permittee shall establish criteria to identify portions of the system where follow-up investigations are needed to determine whether illicit discharges, illicit connections, or other sources of non-storm water have occurred or are likely to occur.
 - c. Each Permittee shall implement and enforce its ordinances, orders, or other legal authority or regulatory mechanism to prevent and eliminate illicit discharges and connections to its storm water collection and conveyance system.
 - d. Each Permittee shall promote, publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from its storm water collection and conveyance system. Each Permittee shall facilitate public reporting through development and operation of a public hotline. Public hotlines can be Permittee-specific or shared by Permittees. All storm water hotlines should be capable of receiving reports in both English and Spanish 24 hours per day, seven days per week. Permittees shall respond to and resolve each reported incident. Each Permittee shall keep a record of all reported incidents and how each was resolved.
5. New Development and Redevelopment Component

For new development and redevelopment projects, Permittees shall require project proponents to incorporate permanent storm water treatment facilities that are designed to infiltrate, at a minimum, runoff generated by the 20 year, 1-hour storm, which equates to approximately one inch of runoff over all impervious surfaces during a 1-hour period.

If infiltrating the entire volume of the 20 year, 1-hour storm is not possible at a given new development or redevelopment site, the Permittee shall require project proponents to infiltrate as much runoff as possible and either:

- a. Document how the project proponent will treat runoff to meet the numeric effluent limits described in Table III.B.1 below; or

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- b. Document coordination with the project proponent to demonstrate that shared storm water treatment facilities treating private property discharges and public right-of-way storm water are sufficient to meet the municipality's average annual fine sediment and nutrient load reduction requirements described in Section IV.B of this Permit.

Table III.B.1 – Numeric effluent limits for runoff discharges

<u>Constituent</u>	<u>Units</u>	<u>Land Treatment/ Infiltration Systems</u>	<u>Surface Waters</u>
Total Nitrogen	mg/L as N	5.0	0.5
Total Phosphorus	mg/L as P	1.0	0.1
Turbidity	NTU	200	20
Oil and Grease	mg/L	40	2.0
Total Iron	mg/L	4.0	0.5

6. Public Education Component

Permittees shall implement a public education program using any appropriate media to increase the community's knowledge of the effect of urban runoff on surface waters and the measures the public can take to help control storm water pollution and encourage behavior to reduce pollutant discharges.

7. Municipal Personnel Training and Education Component

Permittees shall ensure that all municipal personnel and contractors responsible for implementing Permit requirements, for operating municipal facilities covered under Section III.B.2 of this Permit, and for conducting inspections required under Section III.B1-5 of this Permit are adequately trained and educated to perform such tasks.

8. Fiscal Analysis

Each Permittee shall conduct a fiscal analysis of its urban runoff management program in its entirety, including development and implementation of both SWMP and PLRPs (IV.C below), along with operations and maintenances costs. This analysis shall, for each fiscal year covered by this Permit, evaluate the expenditures (such as capital, operation and maintenance, education, and administrative expenditures) expected for Permit implementation. Such analysis shall include a description of the source(s) of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

IV. Lake Tahoe Total Maximum Daily Load Implementation – Pollutant Load Reduction Requirements

A. Baseline Pollutant Loads

The Lake Tahoe TMDL expresses waste load allocations for the urban upland source, which includes discharges from the Permittee's municipal storm water collection, conveyance, and treatment facilities, as percent reductions from a basin-wide baseline load. The baseline basin-wide pollutant loads for the TMDL reflect conditions as of water year 2003/2004 (October 1, 2003 – September 30, 2004), hereafter referred to as "baseline".

To translate basin-wide urban runoff load reduction requirements into jurisdiction-specific load reduction requirements, the Water Board has required the Permittees to conduct a jurisdiction-scale baseline load analysis as the first step in the TMDL implementation process for the urban pollutant source. Each Permittee has completed this analysis, and the submitted baseline pollutant load estimates are the basis for the particle number- and mass-based effluent limits in this Permit (Table IV.B.1).

Permittees will likely gather additional information in the future to enhance the accuracy of the baseline load analysis. Similarly, numeric models used to estimate pollutant loads may be improved over time. Should a Permittee determine that updated load estimation tools or other information are expected to change its baseline pollutant load estimate may request that the Water Board amend its baseline load estimate. Requests for baseline load estimate amendment must include a description of any new information informing the estimate, the magnitude of the proposed adjustment, and a discussion of how the baseline load estimate adjustment will (or will not) change the Permittees PLRP. Water Board staff will bring all requests to amend Permittee baseline load estimates to the Water Board for consideration.

B. Pollutant Load Reduction Requirements and Water Quality-Based Effluent Limits

For the first five year milestone, jurisdiction-specific waste load reduction requirements, incorporated into this Permit as average annual particle number- and mass-based effluent limits (Table IV.B.1), are calculated by multiplying the percentage of reduction required by the urban uplands for each pollutant by each jurisdiction's individual baseline load. Each jurisdiction must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by **September 30, 2016.**

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Table IV.B.1 – Maximum average annual particle number- and mass-based effluent limits for Fine Sediment Particles (FSP) Total Phosphorus (TP) and Total Nitrogen (TN) to meet the first five year TMDL milestone

Jurisdiction	Baseline FSP (# of particles)	FSP Allowable Load	Baseline TP (kg)	TP Allowable Load	Baseline TN (kg)	TN Allowable Load
El Dorado County	2.2 x 10 ¹⁹	2.0 x 10 ¹⁹	1043	970	4082	3755
Placer County	2.6 x 10 ¹⁹	2.3 x 10 ¹⁹	1111	1033	4635	4264
City of South Lake Tahoe	1.9 x 10 ¹⁹	1.7 x 10 ¹⁹	789	734	3361	3092

Pollutant load reductions shall be measured in accordance with the processes outlined in the Lake Clarity Crediting Program Handbook (Attachment D). To demonstrate compliance with the average annual fine sediment particle pollutant load reduction requirements outlined in Table IV.B.1, each Permittee must earn and maintain Lake Clarity Credits in accordance with Table IV.B.2 for water year October 1, 2015 to September 30, 2016, and for subsequent water years.

Table IV.B.2 – Minimum Lake Clarity Credit Requirements

Jurisdiction	Min. Lake Clarity Credit Requirement*
El Dorado County	220
Placer County	260
City of South Lake Tahoe	190

*The Lake Clarity Crediting Program Handbook defines one (1) Lake Clarity Credit as equal to 1.0 x 10¹⁶ fine sediment particles with a diameter less than 16 micrometers

To ultimately achieve the deep water transparency standard, Permittees shall reduce FSP, TP, and TN loading according to the requirements in the Lake Tahoe TMDL outlined for the “Urban Upland” pollutant source (Attachment B). In accordance with the TMDL, incremental pollutant load reductions will result in attaining the deep water transparency standard by the year 2076.

C. Pollutant Load Reduction Plans

Each Permittee shall prepare a detailed plan describing how it expects to meet the pollutant load reduction requirements described in Section IV.B above. Permittees shall submit a plan no later than **March 15, 2013** that shall include, at a minimum, the following elements:

2. Catchment registration schedule

The Pollutant Load Reduction Plan (PLRP) shall include a list of catchments that the Permittee plans to register pursuant to the Lake Clarity Crediting Program (see Attachment D) to meet load reduction requirements. The list shall include catchments where capital improvement projects have been constructed since May 1, 2004 that the Permittee expects to claim credit for, and catchments where projects will be constructed during this Permit term.

The list may also include catchments where Permittees plan actions other than capital improvements (such as enhanced operations and maintenance). The plan shall describe which catchments the Permittee anticipates it will register for each year of this Permit term.

3. Proposed pollutant control measures

For each catchment in the registration plan, the PLRP shall describe storm water program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading.

4. Pollutant load reduction estimates

For each catchment in the registration plan (or a catchment subset that provides adequate representation of various land use and management practice variables) Permittees shall provide estimates of both baseline pollutant loading and expected pollutant loading to demonstrate that proposed actions will, over the course of this Permit term, reduce the Permittee's jurisdiction-wide pollutant load by the amounts specified in Section IV.B above. The pollutant load reduction estimate shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.

5. Load reduction schedule

The PLRP shall describe a schedule for achieving the pollutant load reduction requirements described in Section IV.B above. The schedule shall include an estimate of expected pollutant load reductions for each year of this Permit term based on preliminary numeric modeling results.

6. Annual adaptive management

The PLRP shall include a description of the internal process and procedures to annually assess storm water management activities and associated load reduction progress. The adaptive management discussion shall describe how the Permittee will use information from the previous years' monitoring and implementation efforts to make needed adjustments to ensure compliance with the load reduction requirements specified in Section IV.B.

The Water Board will circulate the submitted PLRPs for public review and will consider PLRP acceptance at a Water Board meeting. Each Permittee's PLRP must be accepted by the Water Board for Permittees to achieve Permit compliance.

D. Land Use Changes and Management Practices

If either land use changes or management practices associated with development or re-development result in a reduction of pollutant loads from the estimated baseline, then this reduction can be counted toward meeting pollutant load reduction requirements. Conversely, actions to eliminate any pollutant load *increase* from these changes will not be counted towards the annual load reduction requirements.

In accordance with the Basin Plan, Permittees must ensure that changes in land use, impervious coverage, or operations and maintenance practices do not increase a catchment's average annual baseline pollutant load.

E. Storm Water Facility Operations and Maintenance

Permittees shall operate and maintain storm water collection, conveyance, and treatment facilities to ensure, at a minimum, that the baseline pollutant loading specified in Table IV.B.1 does not increase.

F. Pollutant Load Reduction Progress

To demonstrate pollutant load reduction progress, each Permittee shall submit a Progress Report by **October 1, 2013**. The Progress Report shall include:

1. A list of erosion control and storm water treatment projects the Permittee completed between the May 1, 2004 and October 15, 2011.
2. Pollutant load reduction estimates for all erosion control and storm water projects and any other load reduction actions up to October 15, 2011. The report shall compare the pollutant load estimates for work completed with the pollutant load reduction requirements described in Section IV.B above.

G. Pollutant Load Reduction Monitoring Requirements

Permittees shall comply with all monitoring and reporting requirements specified in Section I of the attached Monitoring and Reporting Program (Attachment C).

V. Receiving Water Limitations

The Permittees shall comply with discharge prohibitions specified in Sections I and II of this Permit through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the Permittees' SWMPs and other requirements of this Permit, including any modifications. The Permittees' SWMPs shall be designed to achieve compliance with the requirements of Sections I and II of this Permit. If exceedances of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMPs and other requirements of this Permit, the Permittees shall assure compliance with discharge prohibitions and receiving water limitations in Sections I and II of this Permit by complying with the following procedure:

1. Upon a determination by either the Permittee or the Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee shall notify and thereafter submit a report to the Water Board that describes Best Management Practices (BMPs) that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated into the annual report required under Section IV of the Monitoring and Reporting Program (Attachment C) unless the Water Board directs an earlier submittal. The report shall include an implementation schedule. The Water Board may require modifications to the report.
2. If SWMP and/or monitoring program modifications are needed to incorporate new or revised BMPs, adjust implementation schedules, or add additional monitoring, the Permittee will make such changes within 30 days following approval of the report described above by the Water Board.
3. If changes have been made, implement the revised SWMP and monitoring program in accordance with the approved schedule.

So long as the Permittee has complied with the procedures set forth above and is implementing its revised SWMP, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Water Board to develop additional BMPs.

VI. Administrative Provisions

- A. The Water Board reserves the right to revise any portion of this Order upon legal notice to, and after opportunity to be heard is given to, all concerned parties.
- B. Permittees may request that the Water Board consider Permit revisions if new information arises that would influence Permittees ability to comply with pollutant load reduction requirements. Such a request must include and be supported by information consistent with that developed pursuant to Permit Sections III.B.8 and IV.C.
- C. All terms of the attached Monitoring and Reporting Program (Attachment C) are hereby incorporated by reference as requirements under this Permit.
- D. Each Permittee shall comply with the Standard Provisions, Reporting Requirements, and Notifications contained in Attachment G of this Order. This includes 24 hour/5 day reporting requirements for any instance of non-compliance with this Order as described in section B.6 of Attachment G.
- E. All plans, reports, and subsequent amendments submitted in compliance with this Order shall be implemented immediately (or as otherwise specified) and shall be an enforceable part of this Order upon submission to the Water Board. All Permittee submittals must be responsive to, and consistent with the requirements of this Order.
- F. This Order expires on **December 5, 2016**. The Permittees must file a report of waste discharge in accordance with Title 23, California Code of Regulations, no later than 180 days in advance of such date as application for an updated Municipal NPDES Permit.

The report of waste discharge must include a preliminary PLRP as outlined in Permit Sections IV.C.2 and IV.C3 The preliminary PLRP shall describe how each Permittee could meet the pollutant load reduction requirements for the second five-year TMDL implementation period, defined as the ten-year load reduction milestone in Attachment B. Specifically, the preliminary Pollutant Load Reduction Plans shall demonstrate how each Permittee could reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 21 percent, 14 percent, and 14 percent, respectively, by the end of the next permit term.

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MUNICIPAL NPDES PERMIT

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**BOARD ORDER R6T-2011-0101A1
NPDES NO. CAG616001**

G. Table of Required Submittals

Permit Submittal	Permit Section	Submittal/Required Completion Date
Analysis of Existing Legal Authority	III.A.4	March 15, 2012
Statement of Legal Authority	III.A.4	March 15, 2013
Amended Storm Water Management Plan	III.B	October 1, 2013
Pollutant Load Reduction Plan	IV.C	March 15, 2013
Pollutant Load Reduction Progress Report	IV.F	October 1, 2013
Report of Waste Discharge and preliminary Pollutant Load Reduction Plan	VI.F	June 9, 2016
Monitoring and Reporting Program Submittal	Attach. C Section	Submittal/Required Completion Date
Two (2) Catchment Credit Schedules	I.D	March 15, 2012
Storm Water Monitoring Plan	III.C	March 15, 2013
Annual Report	IV	March 15, 2014 and annually thereafter
Development Impact Statement	I.G, IV.I	March 15, 2015

I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on October 10, 2012.


PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

- Attachments:
- A. Fact Sheet
 - B. Pollutant Load Allocation Tables
 - C. Monitoring and Reporting Program
 - D. Lake Clarity Crediting Program Handbook V1.0
 - E. Water Quality Objectives
 - F. Compliance with Water Quality Objectives
 - G. Standard Provisions, Reporting Requirements, and Notifications

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STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM
ORDER NO. R6T-2011-0101A1
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 Total Maximum Daily Load (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 average annual pollutant load reduction estimates using numeric modeling tools. It establishes Lake Clarity Credits (credits) for actions taken to reduce pollutant loads as required by the Lake Tahoe TMDL. 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 estimated fine sediment particle load reductions into the Lake Tahoe Hydrologic Unit from urban storm water, provides methods to assess ongoing performance of implementation actions, and guides interaction between the Water Board and Permittees regarding load reduction progress assessment.

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MUNICIPAL NPDES PERMIT
Monitoring and Reporting Program

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BOARD ORDER R6T-2011-0101A1
NPDES NO. CAG616001

Load reductions are defined as the difference between the estimated average annual amount of pollutants entering Lake Tahoe under standardized baseline conditions and the estimated average annual amount of pollutants entering the lake under expected conditions following management practice implementation.

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

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 conditions used as the basis for modeled load reduction estimates, referred to as “expected” conditions. 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 considered 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 considered to be higher than expected loading and the credit award will be less than the full credit potential amount.

Credits are tracked and awarded 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 load reduction requirements in a subsequent or prior 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 1.0×10^{16} fine sediment particles with a diameter smaller than 16 micrometers (μm).

To demonstrate compliance with the pollutant load reduction requirements outlined in Permit Table IV.B.1, each Permittee must earn and maintain Lake Clarity Credits in accordance with Permit Table IV.B.2 for water year October 1, 2015 to September 30, 2016, and for subsequent water years.

C. Crediting Program Handbook

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

Crediting Program Handbook version 1.0 is incorporated into the Permit as Attachment D and all Lake Clarity Crediting Program procedures are incorporated as enforceable requirements under this Permit. Within the context of this Monitoring and Reporting Program, all Crediting Program 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 the expected conditions to the baseline value 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. Crediting Program 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 Crediting Program Handbook provides detailed instructive support. Generally, the process steps are:

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

For area-wide maintenance practices, Permittees may choose to register their entire jurisdiction as a single catchment. The details associated with such action must follow the procedures and protocols outlined in the Handbook.

To demonstrate proficiency at developing catchment credit schedules and to document pollutant load reduction actions, each Permittee prepared two (2) catchment credit schedules by **March 15, 2012** and participated in catchment credit schedule verification meetings with Water Board staff. Each Permittee will register additional catchments as needed to earn enough credits to meet the requirements contained in Permit Table IV.B.2.

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. In some instances, partial credit may be awarded when actual conditions are worse than expected (see Crediting Program Handbook Appendix C).

Actual field conditions are evaluated and compared 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.

Crediting Program Handbook Chapter 2.1 describes the process for defining inspection needs, performing facilities inspections, and recording results for registered catchments. Crediting Program Handbook Appendix B includes a detailed example of condition assessment inspection and reporting. Crediting Program 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 (subject to Water Board acceptance) to assess, score, and document the actual condition of treatment BMPs and roadways.

BMP RAM 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

The BMP RAM 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 proposal to the Water Board Executive Officer. The submittal must describe how the Permittee will demonstrate that the 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. 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.

G. Impacts Influencing Baseline Pollutant Loads

In accordance with the Basin Plan and Permit Section IV.D, Permittees must ensure that changes in land use, impervious coverage, or operations and maintenance practices do not increase a catchment's average annual baseline pollutant load.

For the 2014 water year (October 1 2013 – September 30, 2014) each Permittee shall conduct a general assessment of the changes in land use, impervious coverage, and operations and maintenance practices to determine whether such changes have increased the baseline average annual pollutant loading as described in Permit Table IV.B. The assessment need only consider land use, impervious cover, and operations and maintenance changes that have occurred in hydraulically connected catchments not registered as part of the Crediting Program that may have occurred since the initial baseline analysis was conducted.

If Permittees determine that changes in baseline loading have occurred, each Permittee shall identify the specific catchments where pollutant loads have changes and ensure those catchments have been registered under the Crediting Program.

II. Inspection Requirements

A. Storm Water System 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 its storm water collection, conveyance, and treatment systems **annually**. Permittees shall conduct facilities inspections between the period of time following spring snow melt and before fall rain and snow storms 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 consider 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 (i.e. catchment)
- Observed system 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 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.

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
- A 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. Each Permittee shall inspect each high priority commercial, industrial, and municipal site annually.

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 facility conditions
- A summary 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 quality and quantity of material applied and recovered. To meet that objective, Permittees shall implement a program that, at a minimum, includes the following:

1. Specifications for the amounts of fine sediment particles, total nitrogen, and total phosphorus allowable in material the Permittee applies as traction abrasives.
2. A program to sample supplied traction abrasive materials to determine whether materials meet the specifications defined according to II.D.1 above.
3. A system 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 authorized entities shall be tracked and recorded along with Permittee applied material.
4. A system to track and record the location and amount that maintenance crews, Permittee contractors, or other authorized entities apply abrasive and deicing material (i.e. amount applied per "zone").

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

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measurable pollutant load reductions at the catchment scale. Documenting and reporting pollutant load reductions at select catchment outlets will help 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, at a minimum:

1. Establish monitoring locations at storm water outfalls of no less than two (2) Crediting Program registered catchments, targeting catchments that discharge directly to surface waters.
2. Obtain continuous flow data at the catchment outfall and report data as seasonal [Fall/Winter (October 1 – February 28) Snow melt (March 1 – May 31) and Summer (June 1 – September 30)] total outflow volumes (in cubic feet).
3. Collect the first flush sample for each seasonal event type (rain-on-snow, snowmelt, summer thunderstorm, fall rain) and collect additional samples spanning storm event hydrographs. For all event types, report the average first flush concentration (mg/L) for each year sampled.

Due to the large total volume of the spring snow melt, collect supplemental samples periodically throughout the snow melt hydrograph. Designate each sample as first flush, rising limb or falling limb of the snow melt hydrograph. Use the range of samples collected to estimate the snow melt event mean concentration (mg/L) for each year sampled, in addition to the first flush concentration.

4. Analyze all collected water samples for the Lake Tahoe TMDL pollutants of concern – fine sediment particles, total suspended sediment, total nitrogen, and total phosphorus. The priority pollutant is fine sediment particles (FSP) less than 16 micrometers (μm) in diameter, that should be reported as both concentration by mass (mg/L) and 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 selected catchment outfall.
5. Total nitrogen, total phosphorus, and total suspended solids sample analyses may be conducted with lesser frequency than FSP analyses provided. Permittees must demonstrate the proposed approach will adequately reflect the range of nutrient and total suspended solid concentrations at the catchment outlet. The sampling strategy shall include a range of event types that is proportional to their frequency of occurrence and total seasonal volume contributions.

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6. Collect paired turbidity and FSP measurements concurrently with flow at the catchment outfall. Relate FSP concentration by mass (mg/L) results to turbidity measurements by developing an FSP concentration/turbidity rating curve that correlates FSP concentration data collected over the range of conditions to measured turbidity. Use accepted FSP mass to particle number conversions to report FSP results as number of particles.
7. Use collected data to estimate the average flow-weighted concentration of each pollutant for each season monitored.
8. 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.
9. Use long-term regional meteorological data to identify whether the data were collected during dry, average, or wet seasons.
10. Follow quality assurance protocols established by the Regional Storm Water Monitoring Program (RSWMP) Quality Assurance Project Plan (May 2011) for all sampling activities.
11. Maintain monitoring locations and collect samples for no fewer than three water years (October 1 – September 30).

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 needed to improve installation and maintenance practices for various BMPs to optimize water quality benefits.

Each Permittee must, at a minimum:

1. Select at least one (1) storm water treatment device or other BMP and monitor effectiveness for at least three successive years.

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2. If the selected BMP is a flow-through structure/device, obtain continuous flow at the inlet and outlet to support seasonal [Fall/Winter (October 1 – February 28) Snow melt (March 1 – May 31) and Summer (June 1 – September 30)] inflow and outflow volume reporting.

If the selected BMP is not a flow-through device, devise a reasonable method to 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. Analyze all collected water samples for the Lake Tahoe TMDL pollutants of concern – fine sediment particles, total nitrogen, and total phosphorus. 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.

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 provide a representative sampling of the range of pollutant concentrations. The sampling strategy should include a range of event types that is proportional to their frequency of occurrence and total seasonal volume contributions.

5. Use collected data to estimate the average concentration of each pollutant for each season monitored.
6. 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 [Fall/Winter (October 1 – February 28) Snow melt (March 1 – May 31) and Summer (June 1 – September 30)].

7. Use long-term regional meteorological data to identify whether the data were collected during dry, average, or wet seasons.
8. Follow quality assurance protocols established by the RSWMP Quality Assurance Project Plan (May 2011) for all sampling activities.

C. Monitoring Plan

By **March 15, 2013** 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 plan shall include a detailed discussion of the rationale for the 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.B 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 submitted monitoring plans must be reviewed and approved by the Water Board to ensure compliance with Permit and Monitoring and Reporting Program requirements.

D. Storm Water Monitoring Data Management

Electronic data shall be in a format compatible with the Surface Water Ambient Monitoring Program (SWAMP) database (See <http://mpsl.mlml.calstate.edu/swdataformats.htm>) and the *California Environmental Data Exchange Network (CEDEN)* at www.ceden.org.

Permittees shall make all monitoring data and associated analytical reports available to managers of a regional data center (such as the Tahoe Integrated Information Management System or RSWMP database), and 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 or posting on Permittee websites.

E. Storm 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 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 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 (with at least one catchment in each jurisdiction) and evaluate performance of no less than two (2) BMPs. Permittees must describe how the selected catchments span an adequate range of land use conditions, size, and water quality improvement strategies to avoid duplication of data collection efforts.

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 after 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 by **March 15, 2014** and by **March 15** of each subsequent year of the permit term. Annual Reports shall include the following elements:

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 for the previous water year to demonstrate progress at meeting pollutant load reduction requirements.

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. Permittees shall discuss any deviations from the accepted PLRP, provide rationale for those deviations, and, if necessary, describe how the Permittee will compensate for any noted shortfalls in expected pollutant load reductions.

B. Storm water Facilities Inspection Report

The annual report shall include a summary report of all storm water facility inspections performed pursuant to Section II.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 a discussion of any planned or completed maintenance and/or enforcement follow up activities.

C. Construction Site Inspection Report

The annual report shall include a 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 a discussion of any planned or completed enforcement follow up activities.

D. Commercial, Industrial, and Municipal Site Inspection Report

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

E. Traction Abrasive and Deicing Material Report

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

F. Storm water Monitoring Report

By March 15, 2014 and by **March 15** of each subsequent year of the Permit term, each Permittee shall submit a comprehensive electronic report that summarizes cumulative storm water monitoring results from the catchment load monitoring and BMP effectiveness evaluations conducted during the previous water year (October 1 – September 30).

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

1. A discussion of monitoring purpose and study design and the underlying 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.

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6. Documentation of data management procedure.
7. Details of data analysis, calculations and assumptions used 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.
9. Catchment outlet monitoring – provide interpretation of annually collected data relative to modeled average annual estimates and conduct an assessment of this data in the context of the water year type (wet, average, dry) using the regional meteorological analysis.
10. For long-term catchment monitoring, provide recent data in context with cumulative comparable results from previous years, noting trends. Consider the season type (wet, average, dry,) for each seasonal data point when evaluating trends and inter-annual variability in catchment results. Compare measured pollutant loads with modeled average annual variables and model outputs.
11. 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 of this Monitoring and Reporting Program. 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.
12. 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 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.
13. For BMP monitoring – provide interpretation of annually collected data relative to applicable model parameters and conduct an assessment of this data in the context of the water year type (wet, average, dry) using the regional meteorological analysis.

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14. A final monitoring summary including the following values for each monitored location.

Season	Seasonal Volume (cf)	Pollutant	Seasonal Concentration (mg/L)	Seasonal Concentration (# particles/L)	Seasonal Load (kg)
Fall Winter (Oct 1-Feb 28)	x	FSP	x	x	x
		TSS	x		x
		TP	x		x
		TN	x		x
Spring Melt (Mar 1-May 31)	x	FSP	x	x	x
		TSS	x		x
		TP	x		x
		TN	x		x
Summer (June 1-Sept 31)	x	FSP	x	x	x
		TSS	x		x
		TP	x		x
		TN	x		x
Water Year Totals: Total WY precipitation (in/yr)					
Water year type: very dry, dry, average, wet, very wet					
Water Year Total	x	FSP			x
		TSS			x
		TP			x
		TN			x

15. A discussion of 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).

16. A discussion of any proposed changes to the storm water monitoring program and the rationale for each proposed change.

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.

G. Illicit Discharge Report

To assess compliance with Permit Sections I.A and III.B.5 each Permittee's annual report shall describe 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.

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H. Education Component Report

Each Permittee's annual report shall summarize all training and education activities conducted during the previous year, including a list of all education materials distributed and training provided to the public, to municipal employees, and to construction, commercial, industrial, or municipal site operators.

I. Impacts Influencing Baseline Pollutant Loads Report

In the annual report for the 2014 water year, Each Permittee shall summarize the assessment conducted pursuant to Monitoring and Reporting Program Section I.G to demonstrate compliance with Permit Order IV.D.

J. 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 as Attachment G.