public review and comment, and Regional Water Board approval. The SQIPs shall include an implementation schedule containing identifiable milestones, performance standards, and a compliance monitoring and reporting program. The Permittees shall incorporate newly developed or updated BMPs and assessment tools/Performance Standards into applicable annual revisions to the SQIPs and adhere to implementation of the new/revised BMPs. The approved SQIPs shall serve as the framework for identification, assignment, and implementation of BMPs. The Permittees shall implement or require implementation of BMPs in the approved SQIPs to ensure that pollutant discharges from the MS4 are prevented or reduced to the MEP. The SQIPs shall contain the following components:

a. Program Management
   i. Legal Authority
   ii. Fiscal Analysis

b. Program Effectiveness Assessment

c. Program Elements
   i. Construction
   ii. Commercial/Industrial
   iii. Municipal Operations
   iv. Illicit (Illegal) Discharges
   v. Public Education and Outreach
   vi. Planning and New Development
   vii. Monitoring Program (including Special Studies)
   viii. Water Quality Based Program (Target Pollutant Program)

Each Permittee’s SQIP shall include a section that identifies all departments within the jurisdiction that conduct activities that may potentially impact urban runoff quality, and their roles and responsibilities under this Order. The annual report shall include an up-to-date organizational chart specifying these departments and key personnel responsible for issuance of enforcement actions.

PROGRAM MANAGEMENT

3. Program management involves ensuring that all elements of the SQIP are implemented on schedule and all requirements of this Order are complied with.

a. **Annual Work Plan:** The Permittees shall submit an Annual Work Plan by 1 May of each year. The Annual Work Plan shall provide the Permittee’s proposed activities for the upcoming fiscal year beginning 1 July of the current year and ending 30 June the following year. The Permittees may submit combined Annual Work Plans that cover more than one Permittee’s jurisdiction, or they may submit separate Annual Work Plans.

b. **Annual Report:** The Permittees shall submit an Annual Report by 1 October of each year. The Annual Report shall document the status of the SQIPs and the
Permittees’ activities during the previous fiscal year, including the results of a qualitative and quantitative assessment of activities implemented by the Dischargers, and the performance of tasks contained in the SQIP. The Annual Report shall include a compilation of deliverables and milestones completed during the previous 12-month period, as described in the SQIP and Annual Work Plan. The Annual Report shall include a program effectiveness assessment and recommended modifications for each Program Element. Each Annual Report shall build upon the previous year's efforts. In each Annual Report, the Permittees may propose pertinent updates, improvements, or revisions to the SQIP, which shall be complied with under this Order.

c. **SQIP Implementation**: Each Permittee shall continue implementation of their current SQIP until such time that the SQIP has been modified to be consistent with this Order and approved by the Regional Water Board. Once approved, the Permittees shall implement the modified SQIP consistent with the schedule specified within this Order. The SQIP, with modifications, revisions, or amendments as may be approved by the Executive Officer or Regional Water Board, is an enforceable part of this Order.

d. **SQIP Modification**: The Permittees’ SQIP may need to be modified, revised, or amended from time to time to respond to a change in conditions and to incorporate more effective approaches to pollutant control. Provisions of this Order require review and/or revision of the certain components of the Permittees’ SQIP. Proposed SQIP revisions will be part of the annual review process and incorporated in the Annual Report.

In addition, the Permittees shall revise their SQIP to comply with regional or watershed-specific requirements, and/or waste load allocations developed and approved pursuant to the process for the designation and implementation of TMDLs for impaired water bodies.

A thirty-day public notice and comment period shall apply to all proposed significant revisions to the SQIP. Significant revisions include the Hydromodification Management Plan (HMP) and *The Stormwater Quality Design Manual for Sacramento and South Placer Regions* required under this Order. SQIP revisions which are significant in terms of the magnitude of public interest, as evidenced by public comments, shall be brought before the Regional Water Board for review and approval. Minor, non-substantive changes to the SQIP are not significant and therefore are not subject to the thirty-day public notice and comment period. Minor SQIP revisions may be approved by the Executive Officer.

e. **Memorandum of Understanding**: The Permittees shall collaborate with each other to address common issues, promote consistency between SQIPs and Monitoring Programs, and to plan and coordinate activities required under this Order.
this Order, identify the expenditures for the previous fiscal year and the budget for the following year necessary to accomplish the activities of the SQIP. Such summary 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.

**PROGRAM ELEMENTS**

8. **Construction Program Element**

   a. The objectives of the Construction Program are to:

      i. Provide adequate legal authority to control pollutants from construction sites with land disturbance greater than or equal to one acre in size;

      ii. Review construction plans and issue grading permits consistent with Permittee requirements;

      iii. Require BMPs to control sediment and pollutants from construction sites;

      iv. Maintain a tracking systems (inventory) of active construction sites;

      v. Maintain tracking system of inspections and enforcement data;

      vi. Inspect construction sites to ensure proper BMP implementation and compliance with Permittee requirements (e.g., Erosion and Sediment Control Plan [ESC plan]) and applicable Provisions of this Order;

      vii. Bring forth enforcement actions for sites in violation of Permittee requirements and advise the Regional Water Board of violations of Construction General Permit requirements;

      viii. Provide regular internal and external training on applicable components of the SQIP and related Permits; and

      ix. **Conduct an assessment as a part of the annual reporting process, determine the effectiveness of the Program Element and identify any necessary modifications.**

   b. Each Permittee shall update and continue to implement the Construction Program Element of its SQIP to reduce pollutants in runoff from construction sites during all construction phases to the MEP. At a minimum, the Construction Program Element shall address the objectives listed above, as well as the following control measures:

      • Pollutant Source Identification
      • Threat to Water Quality Prioritization
9. **Industrial/Commercial Program:**

   a. The objectives of the Industrial/Commercial Program are to:

   i. Provide adequate legal authority to control pollutants from industrial and commercial facilities;

   ii. Develop and maintain an inventory of priority industrial and commercial facilities located within the Permittee’s jurisdiction;

   iii. Prioritize the industrial and commercial facilities within the inventory based on their threat to water quality;

   iv. Conduct inspections of the priority industrial and commercial facilities that pose a significant threat to water quality with an inspection frequency based on the prioritization of the facility. Conduct follow-up inspections to verify compliance;

   v. Implement a progressive enforcement policy to ensure that adequate enforcement is conducted;

   vi. Refer significant violations of the Permittees’ storm water ordinances and potential General Industrial Permit non-filers to the Regional Water Board. Coordinate inspections and enforcement with the Regional Water Board.

   vii. Provide regular internal and external training on components of the SQIP and related Permits; and

   viii. **Conduct an assessment as described in the SQIP to determine the effectiveness of the Program Element and identify any necessary modifications.**

   b. Each Permittee shall update and continue to implement the existing Industrial and Commercial Program component of its SQIP. At a minimum, the Industrial and Commercial Program shall address the objectives listed above, as well as to the following control measures:

   i. Priority Facility Inventory/Tracking
   ii. Prioritization and Inspection
   iii. Industrial/Commercial Outreach
   iv. Enforcement
   v. Training
   vi. **Effectiveness Assessment**

The program shall address the following priority commercial and industrial businesses: auto body shops, auto dealers, auto repair shops, equipment rental companies, nurseries, kennels, restaurants, retail gasoline outlets and
those covered by the General Industrial Permit. The list of industries may be revised based on further prioritization or results of effectiveness assessment as reported in the annual reports.

c. Each Permittee shall require implementation of pollutant reduction and control measures for activities associated with priority industrial and commercial businesses, with the objective of effectively prohibiting non-storm water runoff and reducing pollutants in storm water runoff to the MEP. Except as specified in other sections of this Order, pollutant reduction and control measures can be used alone or in combination, and can include Structural and Source Control BMPs, and operation and maintenance procedures, which can be applied before, during, and/or after pollution generating activities. The Regional Board recognizes that property owners are responsible for selecting and implementing BMPs since the Permittees do not have the authority to specify BMPs.

10. **Municipal Program**

   a. The objectives of the Municipal Program are to:

   i. Respond quickly and appropriately if an illicit discharge threatens to enter or enters the storm drain system;

   ii. Implement standards that require BMPs to reduce pollutants from Permittee owned development and construction projects as specified in the New Development and Construction Elements;

   iii. Implement pollution prevention BMPs for public facilities (e.g., corporation yards, material storage facilities, and vehicle/equipment maintenance facilities) having the potential to discharge pollutants to the storm drain system;

   iv. Implement integrated pest management (IPM) and pesticide storage, usage, and disposal procedures as described in the Pesticide Plan;

   v. Maintain the storm drain system (e.g., drain inlets, ditches/channels, detention basins and pump stations) to remove debris accumulation and prevent flooding;

   vi. Ensure that storm drain inlets are properly and legibly marked to discourage illicit discharges into the storm drain system.

   vii. Conduct street sweeping activities;

   viii. Maintain Permittee-owned parking facilities to minimize the build-up and discharge of pollutants to the storm drain system;

   ix. Permittees having a fire protection agency within their jurisdictional control shall develop and implement a response plan to minimize the impact of
fire fighting flows to the environment. BMPs must be implemented to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes) identified by the Permittees to be significant sources of pollutants to waters of the State. The response plan and BMPs shall be updated and submitted with the Annual Reports.

x. Provide regular internal training on applicable components of the SQIP; and

xi. Conduct an assessment as a part of the annual reporting process, determine the effectiveness of the Program Element and identify any necessary modifications.

b. Each Permittee shall update and continue to implement a Municipal Program in its SQIP to effectively prohibit non-storm water discharges and prevent or reduce pollutants in runoff from all municipal land use areas, facilities, and activities to the MEP. At a minimum, the Municipal Program shall address the objectives listed above, as well as include the following control measures:

i. New Development and Construction Requirements for Municipal Capital Improvement Projects;
ii. Pollution Prevention at Permittee Facilities;
iii. Landscape and Pest Management;
iv. Storm Drain System Maintenance;
v. Street Cleaning and Maintenance;
vi. Parking Facilities Maintenance;
vii. Detention Basin Maintenance;
viii. Emergency Procedures;
ix. Non-emergency Fire Fighting Flows;
x. Training; and
xi. Effectiveness Assessment.

11. Illicit Discharge Program

a. The objectives of the Illicit Discharge Program are to:

i. Provide adequate legal authority to control and/or prohibit pollutants from being discharged to the municipal storm drain system;

ii. Proactively detect illicit discharges and illegal connections through a variety of mechanisms including, but not limited to, public reporting, dry weather monitoring, and field crew inspections;

iii. Upon identification of an illegal connection, investigate and eliminate the connection through a variety of mechanisms including, but not limited to, permitting or plugging the connection;
iv. Upon identification of an illicit discharge, investigate the discharge and conduct any necessary follow up actions to mitigate the impacts of the discharge;

v. Maintain a database for recording the information related to illicit discharges and illegal connections and, to the extent possible, use mapping to assist in evaluating the data; and

vi. Conduct an assessment as described in the SQIP to determine the effectiveness of the Program Element and identify any necessary modifications.

b. Each Permittee shall update and continue to implement an Illicit Discharge Program component of the SQIP to actively seek and eliminate illicit discharges and connections. At a minimum, the Illicit Discharge Detection and Elimination Component shall address the objectives listed above and include the following control measures:

i. Detection of Illicit Discharges and Illegal Connections;

ii. Illegal Connection Identification and Elimination;

iii. Investigation/Inspection and Follow-up Procedures;

iv. Enforcement of Local Codes and Ordinances;

v. Public Reporting of Illicit Discharges and Connections – Public Hotline;

vi. Training; and

vii. Effectiveness Assessment.

12. Public Outreach and Public Education (Collectively Public Outreach Program):

a. Each Permittee shall implement a Public Outreach Program using appropriate media to (1) measurably increase the knowledge of target communities regarding MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to change the behavior of target communities and thereby reduce pollutant releases to MS4s and the environment. To accomplish these goals, the following objectives shall be addressed:

i. Encourage the public to actively participate in the implementation of the storm water program as well as the various outreach events;
ii. Promote the use of the 24-hour public education and illicit discharge reporting hotline;

iii. Implement a public outreach strategy for the overall program that includes developing and distributing materials, conducting a mixed media campaign, participating in community outreach events, and conducting public opinion surveys to gauge the level of awareness and behavior change within a community and/or target audience;

iv. Coordinate with local school districts to deliver storm water education messages to schoolchildren;

v. Implement a business outreach program; and

vi. Conduct an assessment as described in the SQIP to determine the effectiveness of the Program Element and identify any necessary modifications.

b. Each Permittee shall update and continue to implement the Public Outreach Component of its SQIP to educate the public and encourage their participation in the implementation of the SQIP. At a minimum, the Public Outreach Program shall address the objectives listed above and include the following control measures:

   i. Public Participation;

   ii. Hotline;

   iii. Public Outreach Implementation;

   iv. Public School Education;

   v. Business Outreach; and

   vi. Effectiveness Assessment.

c. Each Permittee shall incorporate a mechanism for public participation in the implementation of the SQIP (i.e., programs that engage the public in cleaning up creeks, removal of litter in river embankments, etc.).

**PLANNING AND NEW DEVELOPMENT PROGRAM**

13. The objectives of the Planning and New Development Element are as follows:

   a. Provide a framework and a process to incorporate watershed protection/storm water quality management principles into the Permittees’ General Plan
process, environmental review process, and development permit approval process;

b. Develop a program that covers initial project planning through design, construction and completion, including requirements for long-term maintenance of post-construction storm water controls;

c. Incorporate water quality and watershed protection principles into the Permittee’s policies and into the planning procedures early in the development process;

d. Ensure storm water quality components have been addressed during the entitlement and CEQA process and verified as completed during the development plan process;

e. Ensure that selected post-construction storm water controls will remain effective upon project completion by requiring appropriate maintenance provisions for all priority development projects;

f. Ensure that storm water quality controls are properly selected and required during the development plan review process to minimize storm water quality impacts to the MEP;

g. Ensure that appropriate selected post-construction storm water controls are chosen on the basis of project- and site-specific conditions and land use characteristics, as well as receiving water impacts;

h. Provide regular internal training on applicable components of the SQIP; and

i. **Conduct an assessment as described in the SQIP to determine the effectiveness of the Program Element and identify any necessary modifications.**

14. Each Permittee shall ensure the Planning and New Development Program of its SQIP includes requirements to minimize the short and long-term impacts on receiving water quality from new development and redevelopment. At a minimum, the Planning and New Development Program shall address the objectives listed above, as well as the following:

a. Incorporation of Water Quality Protection Principles into Permittee Procedures and Policies;
b. New/Revised Development Standards: Each Permittee shall continue to implement existing development standards as identified in the Permittees Development Standards Plan (a.k.a. *The Stormwater Quality Design Manual for Sacramento and South Placer Regions*) approved by Regional Water Board in May 2005. The plan identifies measures to reduce pollutant discharges from eight categories of new development and redevelopment (referred to as the Priority Development Project Categories);

c. Plan Review and Approval Process;

d. Maintenance Agreement and Transfer;

e. Training; and

f. **Effectiveness Assessment.**

15. **Water Quality Planning and Design Principles** - In order to reduce pollutants and runoff flows from new development and redevelopment to the MEP, each Permittee shall address the following concepts:

a. Each Permittee shall incorporate water quality and watershed protection principles into planning procedures and policies or requirements to direct land-use decisions and require implementation of consistent water quality protection measures for priority development projects. These principles and policies shall be designed to protect natural water bodies and shall consider, at a minimum, the following:

i. Minimize the amount of impervious surfaces and directly connected impervious surfaces in areas of new development and redevelopment to maximize on-site infiltration of runoff (low impact development practices).

ii. Implement pollution prevention methods supplemented by pollutant source controls and treatment. Use strategies that control the sources of pollutants or constituents (i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into MS4s.

iii. Preserve and create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones (e.g., levees).

iv. Minimize disturbances of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
program shall include information as specified in the Monitoring and Reporting Program of this Order.

b. **Mercury**: To address the mercury impairment of the Delta, Sacramento River, American River, and Lake Natoma, the Permittees shall continue to implement the mercury reduction strategy (Mercury Plan) that was submitted in 2004. Compliance with the Mercury Plan shall be assessed by data and information submitted in the Annual Reports.

In addition, the Permittees shall incorporate the following into their mercury reduction strategy.

i. For public outreach and municipal operations, the Permittees’ mercury control programs shall coordinate with the countywide universal waste (U-waste) management strategy, described in the “Sacramento Countywide U-Waste Collection Strategy Letter Report” (R3 Consulting Group Inc., 2007, pages 9 and 10), and describe in the Annual Reports specific coordination efforts related to mercury control (e.g., fluorescent lamp collections, public outreach, sustainable funding mechanisms, and U-waste tonnage tracking).

ii. For public outreach, the Permittees shall evaluate and summarize the 2004 and 2007 public awareness/opinion survey data related to mercury (e.g., fluorescent lamps disposal). In the 2008/2009 Annual Report, provide recommendations for amending Permittees’ mercury source control programs and amend the mercury source control programs in accordance with those recommendations.

iii. As components of the Monitoring Program, the Permittees shall complete the following efforts, which are further described in the MRP:

   a) Evaluate total mercury and methylmercury data collected under the previous Order and continue urban discharge monitoring to determine the amount of total mercury and methylmercury loading that urban lands within the Sacramento area contribute to individual impaired water bodies (the Delta, Sacramento River, American River, and Lake Natomas).

   b) **Estimate the amount of total mercury and sediment prevented from discharging to receiving waters by existing BMPs such as (but not limited to) street cleaning, detention basins, and erosion and sediment controls.**
c) Consider including monitoring in the design of future BMP studies to estimate the extent to which existing and new BMPs reduce total mercury and methylmercury discharges.

Based on the results of the above mercury-related evaluations and Permittee recommendations, the Executive Officer may require additional mercury monitoring, BMPs, and SQIP revisions.

28. In support of the Water Quality Based Programs, the Permittees shall develop and implement the storm water monitoring program as defined in the Monitoring and Reporting Program No. R5-2008-0142, which is part of this Order, and any revisions thereto adopted by the Regional Water Board.

29. **Program Effectiveness Assessment**

   a. The Permittees shall describe their approach to program effectiveness assessment in their SQIPs and report the results of the assessment in their Annual Reports. The assessment shall identify the direct and indirect measurements that the Permittees used to track the effectiveness of their programs as well as the outcome levels at which the assessment is occurring consistent with this Order. Direct and indirect measurements such as the following shall be included: conformance with established performance standards, quantitative monitoring to assess the effectiveness of representative control measures, measurements or estimates of pollutant load reductions or increases from identified sources where feasible, measurements of raised awareness of the public, and/or detailed accounting/documentation of SQIP accomplishments.

   b. The Permittees shall track the long-term progress of their SQIPs towards achieving improvements in receiving water quality.

   c. The Permittees shall use the information gained from the program effectiveness assessment to improve their SQIPs and identify new BMPs, or modification of existing BMPs. This information shall be reported within the Annual Reports consistent with this Order.

   d. Long Term Effectiveness Assessment (LTEA): Each Permittee shall collaborate with the other Permittees to develop the LTEA of the program, which shall build on the results of the Permittees’ Annual Reports and the initial program effectiveness assessments. The LTEA shall be submitted to the Regional Water Board no later than 180 days prior to the permit expiration date and shall identify the storm water program long term effectiveness in achieving both programmatic goals (raising awareness, changing behavior) and environmental goals (reducing pollutant discharges, improving environmental conditions).
Raw data shall be submitted in electronic format.

5. Effectiveness assessment for each program element, as defined in the SQIP, shall be conducted annually, shall be built upon each consecutive year, and shall identify any necessary modifications. The SQIP shall describe, in detail, the performance standards or goals to use to gauge the effectiveness of the storm water management program. The primary questions that must be assessed for each program element include the following:

a. Level 1 Outcome: Was the Program Element or BMP implemented in accordance with the Permit Provisions, SQIP Control Measures and Performance Standards?

b. Level 2 Outcome: Did the Program Element or BMP raise the target audience’s awareness of an issue?

c. Level 3 Outcome: Did the Program Element or BMP change a target audience’s behavior, resulting in the implementation of recommended BMPs?

d. Level 4 Outcome: Did the Program Element or BMP reduce the load of pollutants from the sources to the storm drain system?

e. Level 5 Outcome: Did the Program Element or BMP enhance or change the urban runoff and discharge quality?

f. Level 6 Outcome: Did the Program Element or BMP enhance or change receiving water quality?

Annually, the Permittees shall evaluate Water Quality Based Programs and shall include consideration of applicable physical, chemical and biological data water quality data. Such evaluation may include graphs, charts, statistics, modeling, and any other analyses in support of the Permittees’ evaluation of the data and conclusions derived from that analysis. Documentation shall include quality assurance and control procedures (QA/QC).

6. Pursuant to 40 CFR 122.42(c)(7), the Permittees shall identify water quality improvements in, or degradation of, urban storm water;

7. For each monitoring component, photographs and maps of all monitoring station locations and descriptions of each location; and
8. Recommendations to improve the monitoring program, BMPs, Performance Standards, and the SQIP to address potential receiving water quality exceedances and potential pollutant sources, and to meet the MEP standard.

9. Provide operating data from all pump stations as an appendix in electronic format as necessary and estimate discharge volumes unless other technically defensible means to estimate urban runoff discharge volumes can be substituted. Historically, the Permittees have estimated runoff volumes based on rainfall-runoff volume empirical relationships.

10. In addition to the requirements listed above, the final Annual Report of this Order’s permit term shall include:

   a. An estimate of total pollutant loads attributable to urban runoff for target pollutants at each discharge monitoring station;

   b. An evaluation of the long-term trends in MS4 discharges and receiving water quality. Several factors need to be considered when evaluating trends, such as changes in sample collection methods, data quality differences, and changes in analytical methods.

   c. An evaluation of significant correlations of target pollutants with other constituents, such as total suspended solids (TSS).

11. The SQIP shall include separate sections for specific program elements, as well as separate sections for Plans required by the Order (i.e., Sediment Monitoring, Mercury Plan).

C. **Notification of Water Quality Exceedances (NWQE):** The Permittees shall notify the Regional Water Board, in writing, of any exceedance in receiving waters of applicable water quality standards within **90 days** of the monitoring event from which the exceedance was detected. The Permittees shall notify the Regional Water Board electronically within **48 hours** of receiving Water Column Toxicity monitoring data in receiving waters that indicates 50% mortality.

D. **Certification:** All work plans and reports submitted to the Regional Water Board shall be signed and certified pursuant to federal regulations at 40 CFR 122.41 (k). Each report shall contain the following completed declaration:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system
C. **Pilot Watershed – New Development BMP Effectiveness Evaluation**

1. The Permittees shall prepare and implement a work plan over the permit term for monitoring a receiving water site within the Upper Laguna Creek Collaborative project area. The work plan shall be submitted as part of the revised SQIP.

   The objective of the study shall include the following:
   
   a. Monitor the reduction of pollutants of concern in storm water including, but not limited to, pathogen indicators, nutrients, heavy metals (including total mercury and methylmercury), and pesticides from a minimum of one BMP (e.g., low impact development) to determine BMP effectiveness;
   
   b. Evaluate the requirements for and installation and maintenance cost of each BMP; and
   
   c. Develop recommendations for appropriate BMPs for the reduction of pollutants of concern in storm water in the Sacramento urbanized area.

D. **Proprietary Treatment BMP Effectiveness Evaluation**

The Permittees shall continue to research the effectiveness and applicability of proprietary structural treatment BMPs for use in the Sacramento urbanized area. This study will include the review of manufacturer’s field test data to verify their claims of product performance. This study shall be conducted a minimum of once per permit term.

IV. **Standard Monitoring Provisions**

All monitoring activities shall meet the following requirements:

A. Monitoring and Records [40 CFR 122.41(j)(1)]

   Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

B. Monitoring and Records [40 CFR 122.41(j)(2)] [California Water Code §13383(a)]

   The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all