related Receiving Water Limitations. Documentation demonstrating no material trash presence or adverse impact may include data from the maintenance of existing trash capture devices, data from trash flux measurements in the MS4 and the water column of streams during wet weather, Trash Hot Spot assessments, and litter audits of street curb and gutter areas in high pedestrian traffic and high commercial activity areas.

If proposed areas for exclusion are commercial, industrial, or high density residential areas, or adjacent to schools or event venues, the Permittee shall collect and submit by February 1, 2013, an additional year of documentation to further support the basis for the exclusion. If the data continue to support the exclusion determination, further trash reduction actions are not required in these areas, unless the Water Board notifies the Permittee otherwise.

Each Permittee shall submit a progress report by February 1, 2011, that indicates whether it is determining its baseline trash load and trash load reduction method individually or collaboratively with other Permittees and a summary of the approach being used. The report shall also include the types and examples of documentation that will be used to propose exclusion areas, and the land use characteristics and estimated area of potentially excluded areas.

iii. **Minimum Full Trash Capture** – Except as excluded below, population-based Permittees shall install and maintain a mandatory minimum number of full trash capture devices by July 1, 2014, to treat runoff from an area equivalent to 30% of Retail/Wholesale Land[49] that drains to MS4s within their jurisdictions (see Table 10.1 in Attachment J). If the sum of the areas that generate trash loads determined pursuant to C.10.a.ii above is a smaller acreage than the required trash capture acreage, a population-based Permittee may reduce its minimum full trash capture requirement to the smaller acreage. A population-based Permittee with a population less than 12,000 and retail/wholesale land less than 40 acres, or a population less than 2000, is exempt from this trash capture requirement. The minimum number of trash capture devices required to be installed and maintained by non-population-based Permittees is included in Attachment J.

All installed devices that meet the following full trash capture definition may be counted toward this requirement regardless of date of installation. A full capture system or device is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate Q resulting from a one-year, one-hour, storm in the sub-drainage area.

### C.10.b. Trash Hot Spot Selection and Cleanup

Trash Hot Spots in receiving waters shall be cleaned annually to achieve the multiple benefits of beginning abatement of these impacts as mitigation and to learn more about the sources and patterns of trash loading.

[49] [http://quake.abag.ca.gov/mitigation/pickdbh2.html] and Association of Bay Area Governments, 2005 ABAG Land Use Existing Land Use in 2005: Report and Data for Bay Area Counties

i. **Hot Spot Cleanup and Definition** – The Permittees shall cleanup selected Trash Hot Spots to a level of "no visual impact" at least one time per year for the term of the permit. Trash Hot Spots shall be at least 100 yards of creek length or 200 yards of shoreline length.

ii. **Hot Spot Selection** – Population-based Permittees shall identify high trash-impacted locations on State waters totaling at least one Trash Hot Spot per 30,000 population, or one per 100 acres of Retail/Wholesale Commercial Land Area, within their jurisdictions based on Association of Bay Area Governments (ABAG) 2005 data1, whichever is greater. If the hot spot number by one of the two determination methods is more than twice that determined by the other method, double the smaller hot spot number shall be used. Otherwise, the larger hot spot number determined by the two methods shall be the Trash Hot Spot assignment for a population-based Permittee. Each population-based Permittee shall select at least one Trash Hot Spot. The Permittees shall each submit selected Trash Hot Spots to the Water Board by July 1, 2010. The list should include photo documentation (one photo per 50 feet) and initial assessment results for the proposed hot spots. The minimum number of Trash Hot Spots per Permittee is included in Attachment J for population and non-population-based Permittees. The Permittees shall proceed with cleanup of selected Trash Hot Spots unless informed otherwise by the Water Board.

iii. **Hot Spot Assessments** – The Permittees shall quantify the volume of material removed from each Trash Hot Spot cleanup, and identify the dominant types of trash (e.g., glass, plastics, paper) removed and their sources to the extent possible. Documentation shall include the trash condition before and after clean up of the entire hot spot using photo documentation with a minimum of one photo per 50 feet of hot spot length. Trash Hot Spots may also be assessed using either the Rapid Trash Assessment (RTA v.8) or the SCVURPPP Urban RTA variation of that method.

### C.10.c. Long-Term Trash Load Reduction

Each Permittee shall submit a Long-Term Trash Load Reduction Plan, including an implementation schedule, to the Water Board by February 1, 2014. The Plan shall describe control measures and best management practices, including any trash reduction ordinances, that are being implemented and the level of implementation and additional control measures and best management practices that will be implemented, and/or an increased level of implementation designed to attain a 70% trash load reduction from its MS4 by July 1, 2017, and 100% by July 1, 2022.

### C.10.d. Reporting

i. In each Annual Report, each Permittee shall provide a summary of its trash load reduction actions (control measures and best management practices) including the types of actions and levels of implementation, the total trash loads and dominant types of trash removed by its actions, and the total trash loads and dominant types of trash for each type of action. The latter shall include each Trash Hot Spot selected pursuant to C.10.b. Beginning with the 2012 Annual

Report, each Permittee shall also report its percent annual trash load reduction relative to its Baseline Trash Load.

**ii.** The Permittees shall retain records for review providing supporting documentation of trash load reduction actions and the volume and dominant type of trash removed from full trash capture devices, from each Trash Hot Spot cleanup, and from additional control measures or best management practices implemented. Data may be combined for specific types of full trash capture devices deployed in the same drainage area. These records shall have the specificity required for the trash load reduction tracking method established pursuant to subsection C.10.a.iii.

## C.11. Mercury Controls

The Permittees shall implement the following control programs for mercury. The Permittees shall perform the control measures and provide reporting on those control measures according to the provisions below. The purpose of this provision is to implement the urban runoff requirements of the San Francisco Bay mercury TMDL and reduce mercury loads to make substantial progress toward achieving the urban runoff mercury load allocation established for the TMDL. The aggregate, regionwide, urban runoff wasteload load allocation is 82 kg/yr. This allocation should be achieved by February 2028 and, as a way to measure progress, an interim loading milestone of 120 kg/yr, halfway between the current load and the allocation, should be achieved by February 2018. If the interim loading milestone is not achieved, the Permittees shall demonstrate reasonable and measurable progress toward achieving the milestone. The Permittees may comply with any requirement of this provision through a collaborative effort.

### C.11.a. Mercury Collection and Recycling Implemented throughout the Region

i. **Task Description** – The Permittees shall promote, facilitate, and/or participate in collection and recycling of mercury containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs).

ii. **Reporting** – The Permittees shall report on these efforts in their Annual Report, including an estimate of the mass of mercury collected.

### C.11.b. Monitor Methylmercury

i. **Task Description** – The Permittees shall monitor methymercury in runoff discharges. The objective of the monitoring is to investigate a representative set of drainages and obtain seasonal information and to assess the magnitude and spatial/temporal patterns of methylmercury concentrations.

ii. **Implementation Level** – The Permittees shall analyze aqueous grab samples already being collected for total mercury analysis for methylmercury as specified in Provision C.8.f.

iii. **Reporting** – The Permittees shall report monitoring results annually beginning with their 2010 Annual Report.

### C.11.c. Pilot Projects To Investigate and Abate Mercury Sources in Drainages, Including Public Rights-Of-Way, and Stormwater Conveyances with Accumulated Sediment that Contains Elevated Mercury Concentrations.

i. **Task Description** – The Permittees shall investigate and abate mercury sources in or to their storm drain systems in conjunction with the Water Board and other appropriate regulatory agencies with investigation and cleanup authorities. The purpose of this task is to implement and evaluate the benefit of a suite of abatement measures at five pilot project locations. The Permittees shall document the knowledge and experience gained through pilot implementation,

and this documentation will provide a basis for determining the scope of abatement implementation in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads abated resulting from implementation of these measures.

ii. **Implementation Level** – Reducing loads of PCBs is the main pilot location selection factor for this Provision, and reducing loads of mercury is a secondary criterion. Accordingly, for PCB pilot project locations selected as part of Provision C.12.c, the Permittees shall conduct reconnaissance in the pilot project drainage areas. The Permittees shall test sediments in storm drains and conveyances to characterize the extent and magnitude of mercury concentrations. They shall evaluate monitoring data and determine if a mercury sediment abatement program would reduce mercury loading significantly. If so determined, the Permittees shall cause abatement activities to be conducted at those sites under Permittee jurisdiction with identified remedial activities. When contamination is located on private property, a Permittee must either exercise direct authority to require cleanup or notify and request other appropriate authorities to exercise their cleanup authority.

iii. **Reporting** – Report on mercury-related aspects of work and loads abated as part of reporting requirements for Provision C.12.c.

### C.11.d. Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices

i. **Task Description** – The Permittees shall jointly evaluate ways to enhance mercury load reduction benefits of operation and maintenance actives that remove or manage sediment. The purpose of this task is to implement these management practices at the pilot scale in five drainages during this permit term. The knowledge and experience gained through pilot implementation will be used to determine the implementation scope of enhanced sediment removal and management practices in subsequent permit terms. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of enhanced sediment removal management practices in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads removed or avoided resulting from implementation of these measures.

ii. **Implementation Level** – In all pilot program drainages selected as part of Provision C.12.c, the Permittees shall jointly evaluate ways to enhance existing sediment removal and management practices such as municipal street sweeping, curb clearing parking restrictions, inlet cleaning, catch basin cleaning, stream and stormwater conveyance system maintenance, and pump station cleaning via increased effort and/or retrofits for the control of mercury. This evaluation shall also include consideration of street flushing and capture, collection, or routing to the sanitary sewer (in coordination and consultation with local sanitary sewer agencies) as a potential enhanced management practice in coordination and consultation with local sanitary sewer agencies.

Beginning July 1, 2011, the Permittees shall implement pilot studies for the most potentially effective measures(s) based on the evaluation of Provision C.11.d.ii in all drainages for which PCB pilot projects are being conducted.

**iii. Reporting**

(1) The Permittees shall present a progress report on the results of the evaluation in their 2010 Annual Report and the final evaluation results in their 2011 Annual Report.

(2) In their March 15, 2014 Integrated Monitoring Report, the Permittees shall report the effectiveness of enhanced practices pilot implementation, report estimates of loads reduced, and present a plan and schedule for possible expanded implementation for subsequent permit terms.

### C.11.e. Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit

**i.** Task Description – The Permittees shall evaluate and quantify the removal of mercury by on-site treatment systems via retrofit of such systems into existing storm drain systems. The purpose of this task is to implement on-site treatment projects at the pilot scale in ten locations during this permit term. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of on-site treatment retrofits in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads removed or avoided resulting from implementation of these measures.

**ii.** Implementation Level – The Permittees, working collaboratively, shall identify at least ten locations throughout the Permittees' jurisdictions that present opportunities to install and evaluate[50] on-site treatment systems (e.g., detention basins, bioretention units, sand filters, infiltration basins, treatment wetlands) and shall assess best treatment options for those locations. Every county (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano) should have at least one location. This effort shall identify potential locations draining a variety of land uses; evaluate technical feasibility; and discuss economical feasibility. The pilot locations may be the same as those chosen for Provision C.12.e, but consideration should be given to areas of elevated mercury concentrations.

On the basis of the Provision C.11.e.ii report, the Permittees shall select sites to perform pilot studies and shall conduct pilot studies in ten selected locations. Pilot studies shall span treatment types and drainage characteristics.

**iii. Reporting –**

(1) In their 2011 Annual Report, the Permittees shall report on candidate locations and types of treatment retrofit for each location. The report shall include assessment of at least ten locations.

[50] Permittees may evaluate a maximum of two pre-existing treatment systems of the ten total required systems to be evaluated provided that these existing treatment systems are applicable to the intent of this provision..

(2) In their March 15, 2014 Integrated Monitoring Report, the Permittees shall report status, results, mercury removal effectiveness, and lessons learned from the ten pilot studies and their plan for implementing this type of treatment on an expanded basis throughout their jurisdictions during the next permit term.

### C.11.f. Diversion of Dry Weather and First Flush Flows to Publicly Owned Treatment Works (POTWs)

i. **Task Description** – The Permittees shall evaluate the reduced loads of mercury from diversion of dry weather and first flush stormwater flows to sanitary sewers. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of urban runoff diversion projects in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads removed or avoided resulting from implementation of these measures.

ii. **Implementation Level** – The Permittees shall implement pilot projects to divert dry weather and first flush flows to POTWs to address these flows as a source of PCBs and mercury to receiving waters. The Permittees are strongly encouraged to make use of stormwater pump stations in this effort because pump station characterization work performed pursuant to Provisions C.2 and C.10, addressing dissolved oxygen depletion and trash impacts, may be efficiently leveraged for the initial phase of these diversion pilot projects. The objectives of this Provision are to: implement five pilot projects for urban runoff diversion from stormwater pump stations to POTWs; evaluate the reduced loads of mercury and PCBs resulting from each diversion; and gather information to guide the selection of additional diversion projects in future permits. Collectively, the Permittees shall select five stormwater pump stations and five alternates by evaluating drainage characteristics and the feasibility of diverting flows to the sanitary sewer.

(1) The Permittees should work with local POTWs on a watershed, county, or regional level to evaluate feasibility and to establish cost sharing agreements. The feasibility evaluation shall include, but not be limited to, costs, benefits, and impacts on the stormwater and wastewater agencies and the receiving waters relevant to the diversion and treatment of the dry weather and first flush flows.

(2) From this feasibility evaluation, the Permittees shall select five pump stations and five alternates for pilot diversion studies. At least one urban runoff diversion pilot project shall be implemented in each of the five counties (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano). The pilot and alternate locations should be located in industrially-dominated catchments where elevated PCB concentrations are documented.

(3) The Permittees shall implement flow diversion to the sanitary sewer at five pilot pump stations. As part of the pilot studies, the Permittees shall monitor, measure, and report mercury load reduction.

**iii. Reporting**

(1) The Permittees shall summarize the results of the feasibility evaluation in their 2010 Annual Report, including:

- Selection criteria leading to the identification of the five candidate and five alternate pump stations for pilot studies.
- Time schedules for conducting the pilot studies.
- A proposed method for distributing mercury load reductions to participating wastewater and stormwater agencies.

(2) The Permittees shall report annually on the status of the pilot studies in each subsequent Annual Report.

(3) The Permittees shall include in their March 15, 2014 Integrated Monitoring Report:

- Evaluation of pilot program effectiveness.
- Mercury loads reduced.
- Updated feasibility evaluation procedures to guide future diversion project selection.

### C.11.g. Monitor Stormwater Mercury Pollutant Loads and Loads Reduced

**i. Task Description** – The Permittees shall develop and implement a monitoring program to quantify mercury loads and loads reduced through source control, treatment and other management measures as required in Provision C.8.f.

**ii. Implementation Level** – The Permittees shall demonstrate progress toward (a) the interim loading milestones, or (b) attainment of the program area allocations, by using the following methods:

(1) Quantify through estimates the annual average mercury load reduced by implementing pollution prevention, source control and treatment control efforts required by the provisions of this permit or other relevant efforts; or

(2) Quantify the mercury load as a rolling five-year annual average using data on flow and water column mercury concentrations; or

(3) Quantitatively demonstrate that the mercury concentration of suspended sediment that best represents sediment discharged with urban runoff is below the target of 0.2 mg mercury/kg dry weight.

**iii. Reporting**

(1) The Permittees shall report in their 2010 Annual Report methods used to assess progress toward meeting WLA goals and a full description of the

measurement and estimation methodology and rationale for the approaches.

(2) The Permittees shall report in their March 15, 2014 Integrated Monitoring Report results of chosen monitoring/measurement approach concerning loads assessment and estimation of loads reduced.

### C.11.h. Fate and Transport Study of Mercury in Urban Runoff

i. **Task Description** – The Permittees shall conduct or cause to be conducted studies aimed at better understanding the fate, transport, and biological uptake of mercury discharged in urban runoff to San Francisco Bay and tidal areas.

ii. **Implementation Level** – The specific information needs include understanding the in-Bay transport of mercury discharged in urban runoff, the influence of urban runoff on the patterns of food web mercury accumulation, and the identification of drainages where urban runoff mercury is particularly important in food web accumulation.

iii. **Reporting** – The Permittees shall submit in their 2010 Annual Report a work plan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a schedule. The Permittees shall report on status of these studies in their 2010, 2011, and 2012 Annual Reports. In the March 15, 2014 Integrated Monitoring Report, the Permittees shall report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

### C.11.i. Development of a Risk Reduction Program Implemented Throughout the Region.

i. **Task Description** – The Permittees shall develop and implement or participate in effective programs to reduce mercury-related risks to humans and quantify the resulting risk reductions from these activities.

ii. **Implementation Level** – The risk reduction activities shall include investigating ways to address public health impacts of mercury in San Francisco Bay/Delta fish, including activities that reduce actual and potential exposure of health impacts to those people and communities most likely to be affected by mercury in San Francisco Bay-caught fish, such as subsistence fishers and their families. Such strategies should include public participation in developing effective programs in order to ensure their effectiveness. The Permittees may include studies needed to establish effective exposure reduction activities and risk communication messages as part of their planning. The risk reduction activities may be performed by a third party if the Permittees wish to provide funding for this purpose. This requirement may be satisfied by a combination of related efforts through the Regional Monitoring Program or other similar collaborative efforts.

iii. **Reporting** – The Permittees shall submit in their 2010 Annual Report the specific manner in which these risk reduction activities will be accomplished and describe the studies to be performed with a schedule. The Permittees shall report on the status of the risk reduction efforts in their 2011 and 2012 Annual Reports. The Permittees shall report the findings and results of the studies completed, planned, or in progress as well as the status of other risk reduction actions in their March 15, 2014 Integrated Monitoring Report.

**C.11.j. Develop Allocation Sharing Scheme with Caltrans.**

i. **Task Description** – The wasteload allocations for urban stormwater developed through the San Francisco Bay mercury TMDL implicitly include California Department of Transportation (Caltrans) roadway and non-roadway facilities within the geographic boundaries of urban runoff management agencies. Consistent with the TMDL, the Permittees are required to develop an equitable mercury allocation-sharing scheme in consultation with Caltrans to address the Caltrans facilities in the program area, and report the details to the Water Board. Alternatively, Caltrans may choose to implement mercury load reduction actions on a watershed or regionwide basis in lieu of sharing a portion of an urban runoff management agencies' mercury allocation. In such a case, the Water Board will consider a separate allocation for Caltrans for which it may demonstrate progress toward attaining an allocation or load reduction in the same manner as municipal programs.

ii. **Reporting** – The Permittees shall report on the status of the efforts to develop this allocation sharing scheme in their 2010, 2011, and 2012 Annual Reports. The Permittees shall submit in their March 15, 2014 Integrated Monitoring Report the manner in which the urban runoff mercury TMDL allocation will be shared between the Permittees and Caltrans.

## C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control programs for PCBs. The Permittees shall perform the control measures and provide reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the urban runoff requirements of the PCBs TMDL and reduce PCBs loads to make substantial progress toward achieving the urban runoff PCBs load allocation. The Permittees may comply with any requirement of this Provision through a collaborative effort.

### C.12.a. Implement Project throughout Region to Incorporate PCBs and PCB-Containing Equipment Identification into Existing Industrial Inspections

i. **Task Description** – The Permittees shall develop training materials and train municipal industrial building inspectors to identify, in the course of their existing inspections, PCBs or PCB-containing equipment. The Permittees shall incorporate such PCB identification into industrial inspection programs.

ii. **Implementation Level** – Where inspectors identify during inspections PCBs or PCB-containing equipment, the Permittees shall document incidents in inspection reports and refer to appropriate regulatory agencies (e.g. county health departments, Department of Toxic Substances Control, California Department of Public Health, and the Water Board) as necessary.

iii. **Reporting** – The Permittees shall report the results of training in their 2010 Annual Report and report on both ongoing training development and inspections for PCB identification in their 2011, and following, Annual Reports.

### C.12.b. Conduct Pilot Projects to Evaluate Managing PCB-Containing Materials and Wastes during Building Demolition and Renovation (e.g., Window Replacement) Activities

i. **Task Description** – The Permittees shall evaluate potential presence of PCBs at construction sites, current material handling and disposal regulations/programs (e.g., municipal ordinances, RCRA, TSCA) and current level of implementation.

ii. **Implementation Level** –

(1) The Permittees shall develop a sampling and analysis plan to evaluate PCBs at construction sites that involve demolition activities (including research on when, where, and which materials potentially contained PCBs).

(2) The Permittees shall implement a sampling and analysis plan at a minimum of 10 sites distributed throughout the combined Permittees' jurisdiction areas.

(3) The Permittees shall develop/select BMPs to reduce or prevent discharges of PCBs during demolition/remodeling. The BMPs will focus on methods

to identify, handle, contain, transport and dispose of PCB-containing building materials.

(4) The Permittees shall develop model ordinances or policies, train and deploy inspectors, and pilot test BMPs at 5 sites.

**iii. Reporting –**

(1) In their 2010 Annual Report, the Permittees shall submit the sampling and analysis plan (of Provision C.12.b.ii.).

(2) In their 2010 Annual Report, the Permittees shall submit a status report on sampling and analysis along with whatever sampling results are available.

(3) In their 2011 Annual Report, the Permittees shall submit the results of the evaluation (Provision C.12.b.i.) of current regulations, level of implementation, and regulatory gaps as well as the final sampling and analysis report, a list of appropriate BMPs, BMP training program, and model ordinances and policies to prevent PCB discharges from building demolition and improvement activities.

(4) In the March 15, 2014 Integrated Monitoring Report, the Permittees shall submit the results of pilot program effectiveness evaluation.

**C.12.c. Pilot Projects to Investigate and Abate On-land Locations with Elevated PCB Concentrations, Including Public Rights-of-way, and Stormwater Conveyances with Accumulated Sediments with Elevated PCBs Concentrations.**

**i. Task Description** – The Permittees shall investigate and abate PCBs sources in or to their storm drain systems in conjunction with the Water Board and other appropriate regulatory agencies with investigation and cleanup authorities. The purpose of this task is to implement and evaluate the benefit of a suite of abatement measures at five pilot project locations. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of abatement projects in subsequent permit terms. The Permittees shall also quantify and report the amount of PCBs loads abated resulting from implementation of these measures.

**ii. Implementation Level –**

(1) The Permittees, working collaboratively, shall identify 5 drainage areas that contain high levels of PCBs and conduct pilot projects to investigate and abate these high PCB concentrations. To accomplish this, the Permittees shall interview municipal staff and review municipal databases, data collected or compiled through grant-funded efforts, other agency files, and other available information to identify potential PCB source areas and areas where PCB-contaminated sediment accumulates, including within stormwater conveyances. The Permittees shall qualitatively rank and map potential PCB source areas within each drainage. Investigation of mercury (Provision C.11.c.) shall be included in these efforts unless not

appropriate. When contamination is located on private property, the Permittees must either exercise direct authority to require cleanup or notify and request other appropriate authorities to exercise their cleanup authority.

(2) The Permittees shall conduct reconnaissance surveys of the identified drainages and gather information concerning past or current use of PCBs to further identify potential source areas and determine whether runoff from such locations is likely to convey soils/sediments with PCBs to municipal stormwater conveyances.

(3) The Permittees shall validate existence of elevated PCB concentrations through surface soil/sediment sampling and analysis where visual inspections and/or other information suggest potential source areas within each drainage.

Where data confirm significantly elevated PCB concentrations in surface soils/sediments within the subject pilot drainage, the Permittees shall provide available information on current site conditions and owner/operators and other potentially responsible parties to Water Board and other appropriate regulatory agencies to facilitate their issuance of orders for further investigation and remediation of subject sites. The Permittees shall assist the Water Board and other appropriate agencies to identify/evaluate funding to perform abatement and/or responsible parties and abatement options.

(4) The Permittees shall identify areas for expedited abatement on the basis of loading potential including factors such as PCB concentration, mass of sediment, and mobilization potential and/or human health protection thresholds, such as California Human Health Screening Levels.

(5) The Permittees shall conduct an abatement program in portions of drainages under their jurisdiction in conjunction with the Water Board and other appropriate agencies.

**iii. Reporting**

(1) The Permittees shall report on the identified suspect drainage areas [Provision C.12.c.ii (1)] in their 2010 Annual Report and results of the surveys [Provision C.12.c.ii.(2)] in their 2011 Annual Report.

(2) The Permittees shall report sampling and chemical analysis results at pilot locations [Provision C.12.c.ii.(3)] in their 2011 Annual Reports.

(3) The Permittees shall report on proposed abatement opportunities and activities [Provision C.12.c.ii.(4) and (5)], responsible parties, funding, agency oversight, and schedules in their 2012 Annual Report.

(4) The Permittees shall report results of abatement program effectiveness and estimates of loads reduced (see C.11.g) in the March 15, 2014 Integrated Monitoring Report.

### C.12.d. Conduct Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices

i. **Task Description** – The Permittees shall jointly evaluate ways to enhance PCBs load reduction benefits of operation and maintenance activities that remove or manage sediment. The purpose of this task is to implement these management practices at the pilot scale in five drainages during this permit term. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of enhanced sediment removal and management practices in subsequent permit terms. The Permittees shall also quantify and report the amount of PCBs loads removed or avoided resulting from implementation of these measures.

ii. **Implementation Level** – In all pilot program drainages selected as part of Provision C.12.c, the Permittees shall jointly evaluate ways to enhance existing sediment removal and management practices such as municipal street sweeping, curb clearing parking restrictions, inlet cleaning, catch basin cleaning, stream and stormwater conveyance system maintenance, and pump station cleaning via increased effort and/or retrofits. This evaluation shall also include consideration of street flushing and capture, collection, or routing to the sanitary sewer (in coordination and consultation with local sanitary sewer agency) as a potential enhanced management practice. The Permittees shall also jointly evaluate existing information on high-efficiency street sweepers. The goal is to evaluate the cost-effectiveness of high-efficiency street sweeping relative to reducing pollutant loads. The Permittees shall develop recommendations for follow-up studies to be conducted.

iii. **Reporting** – The Permittees shall submit a progress report on the results of these two evaluations in their 2010 Annual Report and the final evaluation results in their 2011 Annual Report.

iv. Beginning July 1, 2011, the Permittees shall implement pilot studies for the most potentially effective measure(s) based on the evaluation of Provision C.12.d. ii. throughout the region.

v. **Reporting** – The Permittees shall report effectiveness of enhanced practices pilot implementation in the March 15, 2014 Integrated Monitoring Report, and their plan for implementing enhanced practices in the next permit term.

### C.12.e. Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit

i. **Task Description** – The Permittees shall evaluate and quantify the removal of PCBs by on-site treatment systems via retrofit of such systems into existing storm drain systems. The purpose of this task is to implement on-site treatment projects at the pilot scale in ten locations during this permit term. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of on-site treatment retrofits in subsequent permit terms.

ii. **Implementation Level** – The Permittees, working collaboratively, shall identify at least 10 locations throughout the Permittees' jurisdictions that present opportunities to install and evaluate[51] on-site treatment systems (e.g., detention basins, bioretention units, sand filters, infiltration basins, treatment wetlands) and shall assess the best treatment options for those locations. Every county (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano) should have at least one location. This assessment shall identify potential locations draining a variety of land uses, discuss technical feasibility, and discuss economical feasibility. The Permittees shall choose pilot study locations primarily on the basis of elevated PCBs concentrations with additional consideration to mercury concentrations.

iii. On the basis of the Provision C.12.e.ii. report, the Permittees shall select sites to perform pilot studies and shall conduct pilot studies in selected locations. Taken as a group, these 10 pilot study locations should span treatment types and drainage characteristics.

iv. **Reporting –**

(1) In their 2011 Annual Report, the Permittees shall report on candidate locations with types of treatment retrofit for each location. The report shall include assessment of at least 10 locations.

(2) In the March 15, 2014 Integrated Monitoring Report, the Permittees shall report status, results, PCBs-removal effectiveness, and lessons learned from the pilot studies and their plan for implementing this type of treatment on an expanded basis throughout the region during the next permit term.

### C.12.f. Diversion of Dry Weather and First Flush Flows to POTWs

i. **Task Description** – The Permittees shall evaluate the reduced loads of PCBs from diversion of dry weather and first flush stormwater flows to sanitary sewers. The knowledge and experience gained through pilot implementation will be used to determine the implementation scope of urban runoff diversion in subsequent permit terms. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of urban runoff diversion projects in subsequent permit terms.

ii. **Implementation Level** – The Permittees shall implement pilot projects to address the role of pump stations as a source of pollutants of concern (primarily PCBs and secondarily mercury). This work is in addition to Provisions C.2 and C.10 that address dissolved oxygen depletion and trash impacts in receiving waters. The objectives of this provision are: to implement five pilot projects for urban runoff diversion from stormwater pump stations to POTWs; evaluate the reduced loads of mercury and PCBs resulting from the diversion; and gather

[51] The Permittees may evaluate a maximum of two pre-existing treatment systems of the ten total required systems to be evaluated provided that these existing treatment systems are applicable to the intent of this provision.

information to guide the selection of additional diversion projects required in future permits. Collectively, the Permittees shall select 5 stormwater pump stations and 5 alternates by evaluating drainage characteristics and the feasibility of diverting flows to the sanitary sewer.

(1) The Permittees should work with the local POTW on a watershed, program, or regional level to evaluate feasibility and to establish cost sharing agreements. The feasibility evaluation shall include, but not be limited to, costs, benefits, and impacts on the stormwater and wastewater agencies and the receiving waters relevant to the diversion and treatment of the dry weather and first flush flows.

(2) From this feasibility evaluation, the Permittees shall select 5 pump stations and 5 alternates for pilot diversion studies. At least one urban runoff diversion pilot project shall be implemented in each of the five counties (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano). The pilot and alternate locations should be located in industrially dominated catchments where elevated PCB concentrations are documented.

(3) The Permittees shall implement flow diversion to the sanitary sewer at the 5 pilot pump stations. As part of the pilot studies, they shall monitor and measure PCBs load reduction.

**iii. Reporting –**

(1) The Permittees shall summarize the results of the feasibility evaluation in their 2010 Annual Report, including:

- Selection criteria leading to the identification of the 5 candidate and 5 alternate pump station for pilot studies.
- Time schedules for conducting the pilot studies.
- A proposed method for distributing PCBs load reductions to participating wastewater and stormwater agencies.

(2) The Permittees shall report annually on the status of the pilot studies in each subsequent annual report.

(3) The March 15, 2014 Integrated Monitoring Report shall include:

- Evaluation of pilot program effectiveness.
- PCBs loads reduced.
- Updated feasibility evaluation procedures to guide future diversion project selection.

## C.12.g. Monitor Stormwater PCB Pollutant Loads and Loads Reduced

The Permittees shall develop and implement a monitoring program as required in Provision C.8.f to quantify PCBs loads and loads reduced (see C.11.g for details) through the source control, treatment and other management measures implemented as part of the pilot studies of C.12.a through C.12.f.

### C.12.h. Fate and Transport Study of PCBs in Urban Runoff

i. **Task Description** – The Permittees shall conduct or cause to be conducted studies aimed at better understanding the fate, transport, and biological uptake of PCBs discharged in urban runoff.

ii. **Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.

iii. **Reporting** – The Permittees shall submit in their 2010 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a schedule. The Permittees shall report on status of the studies in their 2011 and 2012 Annual Reports. The Permittees shall report in the March 15, 2014 Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

### C.12.i. Development of a Risk Reduction Program Implemented throughout the Region

i. **Task Description** – The Permittees shall develop and implement or participate in effective programs to reduce PCBs-related risks to humans and quantify the resulting risk reductions from these activities.

ii. **Implementation Level** – The risk reduction activities shall include investigating ways to address public health impacts of PCBs in San Francisco Bay/Delta fish, including activities that reduce actual and potential exposure of health impacts to those people and communities most likely to be affected by PCBs in San Francisco Bay-caught fish, such as subsistence fishers and their families. Such strategies should include public participation in developing effective programs in order to ensure their effectiveness. The Permittees may include studies needed to establish effective exposure reduction activities and risk communication messages as part of their planning. The risk reduction activities may be performed by a third party if the Permittees wish to provide funding for this purpose. This requirement may be satisfied by a combination of related efforts through the Regional Monitoring Program or other similar collaborative efforts.

iii. **Reporting** – The Permittees shall submit in their 2010 Annual Report the specific manner in which these risk reduction activities will be accomplished and describe the studies to be performed with a schedule. The Permittees shall report on status of the studies in their 2011 and 2012 Annual Reports. The Permittees shall report the findings and results of the studies completed, planned, or in progress as well as the status of other risk reduction actions in the March 15, 2014 Integrated Monitoring Report.

## C.13. Copper Controls

The control program for copper is detailed below. The Permittees shall implement the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the control measures identified in the Basin Plan amendment necessary to support the copper site-specific objectives in San Francisco Bay. The Permittees may comply with any requirement of C.13 Provisions through a collaborative effort.

### C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction.

i. **Task Description** – The Permittees shall ensure that local ordinance authority is established to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of the surface of copper architectural features, including copper roofs to storm drains.

ii. **Implementation Level**

(1) The Permittees shall develop BMPs on how to manage the waste during and post-construction.

(2) The Permittees shall require use of appropriate BMPs when issuing building permits.

(3) The Permittees shall educate installers and operators on appropriate BMPs.

(4) The Permittees shall enforce against noncompliance.

iii. **Reporting**

(1) The Permittees shall certify adequate legal authority in their 2011 Annual Report or otherwise provide justification for schedule not to exceed one year to comply.

(2) The Permittees shall report annually, starting with their 2012 Annual Report, on training, permitting and enforcement activities.

(3) In their 2013 Annual Report, the Permittees shall evaluate the effectiveness of these measures, including BMP implementation and propose any additional measures to address this source.

### C.13.b. Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals

i. **Task Description** – By adopting local ordinances, the Permittees shall prohibit discharges to storm drains from pools, spas, and fountains that contain copper-based chemicals.

ii. **Implementation Level** – The Permittees shall either: 1) require installation of a sanitary sewer discharge connection for pools, spas, and fountains, including

connection for filter backwash, with a proper permit from the POTWs; or 2) require diversion of discharge for use in landscaping or irrigation.

iii. **Reporting** – The Permittees shall certify adequate legal authority in their 2011 Annual Report or otherwise provide justification for schedule not to exceed one year to comply.

### C.13.c. Vehicle Brake Pads

i. **Task Description** – The Permittees shall engage in efforts to reduce the copper discharged from automobile brake pads to surface waters via urban runoff.

ii. **Implementation Level** – The Permittees shall participate in the Brake Pad Partnership (BPP) process to develop California legislation phasing out copper from certain automobile brake pads sold in California.

iii. **Reporting** – The Permittees shall report on legislation development and implementation status in Annual Reports during the permit term. In their 2013 Annual Report, the Permittees shall assess status of copper water quality issues associated with automobile brake pads and recommend brake pad-related actions for inclusion in subsequent permits if needed.

### C.13.d. Industrial Sources

i. **Task Description** – The Permittees shall ensure industrial facilities do not discharge elevated levels of copper to storm drains by ensuring, through industrial facility inspections, that proper BMPs are in place.

ii. **Implementation Level –**

(1) As part of industrial site controls required by Provision C.4, the Permittees shall identify facilities likely to use copper or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers) and include them in their inspection program plans.

(2) The Permittees shall educate industrial inspectors on industrial facilities likely to use copper or have sources of copper and proper BMPs for them.

(3) As part of the industrial inspection, inspectors shall ensure that proper BMPs are in place at such facilities to minimize discharge of copper to storm drains, including consideration of roof runoff that might accumulate copper deposits from ventilation systems on-site.

iii. **Reporting**

The Permittees shall highlight copper reduction results in the industrial inspection component in the C.13 portion of each Annual Report beginning September 2010.

### C.13.e. Studies to Reduce Copper Pollutant Impact Uncertainties

i. **Task Description** – The Permittees shall conduct or cause to be conducted technical studies to investigate possible copper sediment toxicity and technical studies to investigate sub-lethal effects on salmonids.

ii. **Implementation Level** – Technical uncertainties regarding copper effects in the Bay are described in the Basin Plan's implementation program for copper site-specific objectives. These uncertainties include toxicity to Bay benthic organisms possibly caused by high copper concentrations as well as possible impacts to the olfactory system of salmonids. The Permittees shall ensure that these studies are supported and conducted. Similar requirements are included in NPDES permits for wastewater discharges. The Permittees shall submit in their 2010 Annual Report the specific manner in which these information needs will be accomplished and describe the studies to be performed with a schedule. The Permittees shall report the findings and results of the studies completed, planned, or in progress in their 2012 Annual Report.

## C.14. Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides and Selenium

The control program for PBDEs, legacy pesticides, and selenium is detailed below. The Permittees shall perform the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to gather concentration and loading information on a number of pollutants of concern (e.g., PBDEs, DDT, dieldrin, chlordane, selenium) for which TMDLs are planned or are in the early stages of development. The Permittees may comply with any requirement of C.14 Provisions through a collaborative effort.

### C.14.a. Control Program for PBDEs, Legacy Pesticides, and Selenium.

i. **Task Description** – To determine if urban runoff is a conveyance mechanism associated with the possible impairment of San Francisco Bay for PBDEs, legacy pesticides (such as DDT, dieldrin, and chlordane), and selenium, the Permittees shall work with the other municipal stormwater management agencies in the Bay Region to implement a plan (PBDEs/Legacy Pesticides/Selenium Plans) to identify, assess, and manage controllable sources of PBDEs, legacy pesticides, and selenium found in urban runoff, if any. The Water Board recognizes that these three pollutants are distinct in terms of origin and transport, but they have been grouped into a single permit provision because the requirements are identical. The Water Board anticipates that some of the control measures that are developed for PCBs consistent with aforementioned efforts warrant consideration for the control of PBDEs and possibly legacy pesticides.

ii. **Implementation Level** – The PBDEs/Legacy Pesticides/Selenium Plan shall include actions to do the following:

Characterize the representative distribution of PBDEs, legacy pesticides, and selenium in the urban areas of the Bay Region covered by this permit to determine:

(1) If PBDEs, legacy pesticides, and selenium are present in urban runoff;

(2) If PBDEs, legacy pesticides, or selenium are distributed relatively uniformly in urban areas; and

(3) Whether storm drains or other surface drainage pathways are sources of PBDEs, legacy pesticides, or selenium in themselves, or whether there are specific locations within urban watersheds where prior or current uses result in land sources contributing to discharges of PBDEs, legacy pesticides, or selenium to San Francisco Bay via urban runoff conveyance systems.

iii. Report on progress in 2010 and 2011 Annual Reports. Submit in the 2012 Annual Report a report with the results of the characterization of PBDEs, legacy pesticides, and selenium in urban areas throughout the Bay Region.

iv. Provide information to allow calculation of PBDEs, legacy pesticides, and selenium loads to San Francisco Bay from urban runoff conveyance systems.

**v.** Submit in the 2013 Annual Report a report with the information required to compute such loads to San Francisco Bay of PBDEs, legacy pesticides, and selenium from urban runoff conveyance systems throughout the Bay.

**vi.** Identify control measures and/or management practices to eliminate or reduce discharges of PBDEs, legacy pesticides, or selenium conveyed by urban runoff conveyance systems.

**vii.** Submit in the 2013 Annual Report a report identifying such control measures/management practices.

## C.15. Exempted and Conditionally Exempted Discharges

The objective of this provision is to exempt unpolluted non-stormwater discharges from Discharge Prohibition A.1 and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted from Discharge Prohibition A.1, the Permittees must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures – as listed below – to eliminate adverse impacts to waters of the State consistent with the discharge prohibitions of the Order.

### C.15.a. Exempted Non-Stormwater Discharges (Exempted Discharges):

i. **Discharge Type** – In carrying out Discharge Prohibition A.1, the following unpolluted discharges are exempted from prohibition of non-stormwater discharges:

(1) Flows from riparian habitats or wetlands;

(2) Diverted stream flows;

(3) Flows from natural springs;

(4) Rising ground waters;

(5) Uncontaminated and unpolluted groundwater infiltration;

(6) Single family homes' pumped groundwater, foundation drains, and water from crawl space pumps and footing drains;

(7) Pumped groundwater from drinking water aquifers; and

(8) NPDES permitted discharges (individual or general permits).

ii. **Implementation Level** – The non-stormwater discharges listed in Provision C.15.a.i above are exempted unless they are identified by the Permittees or the Executive Officer as sources of pollutants to receiving waters. If any of the above categories of discharges, or sources of such discharges, are identified as sources of pollutants to receiving waters, such categories or sources shall be addressed as conditionally exempted discharges in accordance with Provision C.15.b below.

### C.15.b. Conditionally Exempted Non-Stormwater Discharges:

The following non-stormwater discharges are also exempt from Discharge Prohibition A.1 if they are either identified by the Permittees or the Executive Officer as not being sources of pollutants to receiving waters, or if appropriate control measures to eliminate adverse impacts of such sources are developed and implemented in accordance with the tasks and implementation levels of each category of Provision C.15.b.i-viii below.

i. **Discharge Type** – Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains

(1) **Pumped Groundwater from Non Drinking Water Aquifers** – Groundwater pumped from monitoring wells, used for groundwater basin management, which are owned and/or operated by the Permittees who pump groundwater as drinking water. These aquifers tend to be shallower, when compared to drinking water aquifers.

(a) **Implementation Level** – Twice a year (once during the wet season and once during the dry season), representative samples shall be taken from each aquifer that potentially will discharge or has discharged into a storm drain. Samples collected and analyzed for compliance in accordance with self-monitoring requirements of other NPDES permits or sample data collected for drinking water regulatory compliance may be submitted to comply with this requirement as long as they meet the following criteria:

(i) The water samples shall meet water quality standards consistent with the existing effluent limitations in the Water Board's NPDES General Permits, such as NPDES Nos. CAG912002 and CAG912003 for Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by fuel and VOCs, respectively, and NPDES No. CAG912004 for discharges of low-level, incidental, and potentially contaminated groundwater.

(ii) The water samples shall be analyzed using approved USEPA Methods (e.g., (a) USEPA Method 160.2 for total suspended solids; (b) USEPA Method 8015 Modified for total petroleum hydrocarbons; (c) USEPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds; and (d) USEPA Method 3005 for metals.

(iii) The water samples shall be analyzed for pH and turbidity.

(iv) If a Permittee is unable to comply with the above criteria, the Permittee shall notify the Water Board upon becoming aware of the compliance issue.

(b) **Required BMPs** – When uncontaminated (meeting the criteria in C.15.b.i.(1)(a)(i)) groundwater is discharged from these monitoring wells, the following shall be implemented:

(i) Discharges shall be properly controlled and maintained to prevent erosion at the discharge point and at a rate that avoids scouring of banks and excess sedimentation in the receiving waterbody.

(ii) Appropriate BMPs shall be implemented to remove total suspended solids and silt to allowable discharge levels. Appropriate BMPs may include filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.

(iii) Turbidity of the discharged groundwater shall be maintained below 50 NTUs for discharges to dry creeks, 110 percent of the

ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for flowing streams with turbidities less than or equal to 50 NTU.

(iv) pH of the discharged groundwater shall be maintained within the range of 6.5 to 8.5.

(c) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

(2) **Pumped[52] Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**

(a) Proposed new discharges of uncontaminated groundwater at flows of 10,000 gallons/day or more and all new discharges of potentially contaminated groundwater shall be reported to the Water Board so that they can be subject to NPDES permitting requirements.

(b) Proposed new discharges of uncontaminated groundwater at flows of less than 10,000 gallons/day shall be encouraged to discharge to a landscaped area or bioretention unit that is large enough to accommodate the volume.

(c) If the discharge options in C.15.b.i.(2)(b) above are not feasible and these discharges must enter a storm drain, sampling shall be done to verify that the discharge is uncontaminated.

(i) The discharge shall meet water quality standards consistent with the existing effluent limitations in the Water Board's NPDES General Permits, such as NPDES Nos. CAG912002 and CAG912003 for Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by fuel and VOCs, respectively, and NPDES No. CAG912004 for discharges of low-level, incidental, and potentially contaminated groundwater.

(ii) The Permittees shall require that water samples from these discharge types be analyzed using approved USEPA Methods (e.g., (a) USEPA Method 160.2 for total suspended solids; (b) USEPA Method 8015 Modified for total petroleum hydrocarbons; (c) USEPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds; and (d) USEPA Method 3005 for metals.

(d) **Required BMPs** – When the discharge has been verified as uncontaminated per sampling completed in C.15.b.i.(2)(c) above, the Permittees shall require the following during discharge:

(i) Proper control and maintain to prevent erosion at the discharge point and at a rate that avoids scouring of banks and excess sedimentation in the receiving waterbody.

(ii) Appropriate BMPs to render pumped groundwater free of pollutants and therefore exempted from prohibition may include

[52] Pumped groundwater not exempted in C.15.a or conditionally exempted in C.15.b.i.(1).

the following: filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.

(iii) Testing of water samples for turbidity and pH on the first two consecutive days of dewatering.

(iv) Turbidity of discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for a flowing stream with turbidities less than or equal to 50 NTU.

(v) pH of discharged water shall be maintained within the range of 6.5 to 8.5.

(e) If a Permittee determines that a discharger or a project proponent is unable to comply with the above criteria, the discharger shall be directed to obtain approval or permits directly from the Water Board.

(f) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

**ii. Discharge Type – Air Conditioning Condensate**

**Required BMPs** – Condensate from air conditioning units shall be directed to landscaped areas or the ground. Discharge to a storm drain system may be allowed if discharge to landscaped areas or the ground is not feasible.

**iii. Discharge Types** – Planned,[53] Unplanned,[54] and Emergency Discharges of the Potable Water System

(1) **Planned Discharges** – Planned discharges are routine operation and maintenance activities in the potable water distribution system that can be scheduled in advance, such as disinfecting water mains, testing fire hydrants, storage tank maintenance, cleaning and lining pipe sections, routine distribution system flushing, reservoir dewatering, and water main dewatering activities. The following requirements only apply to those Permittees that are water purveyors and pertain to their planned discharges of potable water to their storm drain systems.

(a) **Required BMPs**[55] – The Permittees shall implement appropriate BMPs for dechlorination, and erosion and sediment controls for all planned potable water discharges.

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[53] Planned discharges typically result from required routine operation and maintenance activities that can be scheduled in advance. Planned discharges are easier to control than unplanned discharges, and the BMPs are significantly easier to plan and implement.

[54] Unplanned discharges are non-routine, the result of accidents or incidents that cannot be scheduled or planned for in advance.

[55] Reference for BMPs, monitoring methods: *Guidelines for the Development of Your BMP Manual for Drinking Water System Releases.* Developed by the California-Nevada Sections of the American Water Works Association (CA-NV AWWA), Environmental Compliance Committee (ECC) 2005.

(b) **Notification Requirements**

(i) The Permittees shall notify the Water Board staff at least one week in advance for planned discharges with a flow rate of 250,000 gallons per day or more, or a total volume of 500,000 gallons or more. The Permittees shall also notify other interested parties who may be impacted by planned discharges, such as flood control agencies, downstream jurisdictions, and non-governmental organizations such as creek groups, before discharge. The notification shall include the following information, but is not limited to: (1) project name; (2) type of discharges; (3) receiving waterbody(ies); (4) date of discharge; (5) time of discharge (in military time); (6) estimated volume (gallons); and (7) estimated flow rate (gallons per day); and (8) monitoring plan of the discharges and receiving water. If receiving water monitoring is infeasible or is not practicable, justification shall be provided.

(c) **Monitoring and Reporting Requirements**

(i) The Permittees shall monitor planned discharges for pH, chlorine residual, and turbidity.

(ii) The following discharge benchmarks shall be used to evaluate the effectiveness of BMPs for all planned discharges:

- Chlorine residual 0.05 mg/L using the field test (Standard Methods 4500-Cl F and F) or equivalent
- pH ranges between 6.5 and 8.5
- Turbidity of 50 NTU post-BMPs or limit increase in turbidity above background level as follows:

| Receiving Water Background | Incremental Increase |
|---|---|
| Dry Creek | 50 NTU |
| < 50 NTU | 5 NTU |
| 50–100 NTU | 10 NTU |
| > 100 NTU | 10% of background |

(iii) The Permittees shall submit the following information with the Annual Report in tabular form for all planned discharges. Reporting content shall include, but is not limited to the following parameters: (1) project name; (2) type of discharge; (3) receiving waterbody(ies); (4) date of discharge; (5) duration of discharge (in military time); (6) estimated volume (gallons); (7) estimated flow rate (gallons per day); (8) chlorine residual (mg/L); (9) pH; (10) turbidity (NTU) for receiving water where feasible and point of discharge, and (11) description of implemented BMPs or corrective actions.

(2) **Unplanned Discharges** – Unplanned discharges are non-routine activities such as water line breaks, leaks, overflows, fire hydrant shearing, and emergency flushing. The following requirements only apply to those Permittees that are water purveyors and pertain to their unplanned discharges of potable water to their storm drain systems.

(a) **Required BMPs** – The Permittees shall implement appropriate BMPs for dechlorination and erosion and sediment control for all unplanned discharges upon containing the discharge and attaining safety of the discharge site.

(b) **Administrative BMPs** – In some instances, the Permittees shall implement Administrative BMPs, such as source control measures, managerial practices, operations and maintenance procedures, or other measures to reduce or prevent potential pollutants from being discharged during unplanned discharges upon containing the discharge and attaining safety of the discharge site.

(c) **Notification Requirements**

(i) The Permittees shall report to the State Office of Emergency Services as soon as possible, but no later than two hours after becoming aware of (1) any aquatic impacts (e.g., fish kill) as a result of the unplanned discharges, or (2) when the discharge might endanger or compromise public health and safety.

(ii) The Permittees shall report to Water Board staff, by telephone or email as soon as possible, but no later than 24 hours after becoming aware of any unplanned discharges, where the total chlorine residual is greater than 0.05 mg/L and the total volume is approximately 50,000 gallons or more.

- Within five working days after the 24-hour telephone or email report, the Permittees shall submit a report documenting the discharge and corrective actions taken to Water Board staff and other interested parties.

**(d) Monitoring and Reporting Requirements**

(i) The Permittees shall monitor at least 10% of their unplanned discharges for pH and chlorine residual, and visually assess each discharge for turbidity immediately downstream of implemented BMPs to demonstrate their effectiveness. After the implementation of appropriate BMPs, the discharge pH levels outside the discharge ranges (below 6.5 and above 8.5), chlorine residual above 0.05 mg/l, or moderate and high turbidity shall trigger BMP improvement. If the Permittees monitor more than 10% of the unplanned discharges, all monitoring results shall be included in the Annual Report.

(ii) The Permittees shall submit the following information with the Annual Report in tabular form for all unplanned discharges. The reporting format and content shall be as described in Provision C.15.b.ii.(1)(c)(iii) of the Planned Discharges above. In addition, these reports shall also state the time of discharge discovery, notification time, inspector arrival time, and responding crew arrival time.

(iii) After 18 months of consecutive data gathering, a Permittee may propose, to the Executive Officer, a reduced monitoring plan targeting specific "high-risk" or "environmentally sensitive"

areas (i.e., areas that are prone to erosion and excess sedimentation at high flows, support rare or endangered species, or provide aquatic habitat with proven effective BMPs). Until the Executive Officer approves the reduced monitoring plan, the Permittee shall continue the monitoring plan prescribed in C.15.b.iii.(2)(d)(i).

(3) **Emergency Discharges** – Emergency discharges are the result of firefighting, unauthorized hydrant openings, natural or man-made disasters (e.g., earthquakes, floods, wildfires, accidents, terrorist actions).

**Required BMPs**

(a) The Permittees shall implement or require fire fighting personnel to implement BMPs for emergency discharges. However, the BMPs should not interfere with immediate emergency response operations or impact public health and safety. BMPs may include, but are not limited to, the plugging of the storm drain collection system for temporary storage, the proper disposal of water according to jurisdictional requirements, and the use of foam where there may be toxic substances on the property the fire is located.

(b) During emergency situations, priority of efforts shall be directed toward life, property, and the environment (in descending order). The Permittees or fire fighting personnel shall control the pollution threat from their activities to the extent that time and resources allow.

(c) **Reporting Requirements** – Reporting requirements will be determined by Water Board staff on a case-by-case basis, such as for fire incidents at chemical plants.

**iv. Discharge Type – Individual Residential Car Washing**

**Required BMPs**

(1) The Permittees shall discourage through outreach efforts individual residential car washing within their jurisdictional areas that discharge directly into their MS4s.

(2) The Permittees shall encourage individuals to direct car wash waters to landscaped areas, use as little detergent as necessary, wash cars at commercial car wash facilities, etc.

**v. Discharge Type – Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges**

(1) **Required BMPs**

(a) The Permittees shall prohibit discharge of water that contains chlorine residual, copper algaecide, filter backwash or other pollutants to storm drains or to waterbodies. Such polluted discharges from pools, hot tubs, spas, and fountains shall be directed to the sanitary sewer (with the local sanitary sewer agency's approval) or to landscaped areas that can accommodate the volume.

(b) Discharges from swimming pools, hot tubs, spas and fountains shall be allowed into storm drain collection systems only if there are no

other feasible disposal alternatives (e.g., disposal to sanitary sewer or landscaped areas) and if the discharge is properly dechlorinated to non-detectable levels of chlorine consistent with water quality standards.

(c) The Permittees shall require that new or rebuilt swimming pools, hot tubs, spas and fountains within their jurisdictions have a connection[56] to the sanitary sewer to facilitate draining events. The Permittees shall coordinate with local sanitary sewer agencies to determine the standards and requirements necessary for the installation of a sanitary sewer discharge location to allow draining events for pools, hot tubs, spas, and fountains to occur with the proper permits from the local sanitary sewer agency.

(d) The Permittees shall improve their public outreach and educational efforts and ensure implementation of the required BMPs and compliance in commercial, municipal, and residential facilities.

(e) The Permittees shall implement the Illicit Discharge Enforcement Response Plan from C.5.b for polluted (contains chlorine, copper algaecide, filter backwash, or other pollutants) swimming pool, hot tub, spa, or fountain waters that get discharged into the storm drain.

(2) **Reporting** – The Permittees shall keep records of the authorized major discharges of dechlorinated pool, hot tubs, spa and fountain water to the storm drain, including BMPs employed; such records shall be available for inspection by the Water Board.

**vi. Discharge Type – Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering**

(1) **Required BMPs** – The Permittees shall promote measures that minimize runoff and pollutant loading from excess irrigation via the following:

(a) Promoting and/or working with potable water purveyors to promote conservation programs that minimize discharges from lawn watering and landscape irrigation practices;

(b) Promoting outreach messages regarding the use of less toxic options for pest control and landscape management;

(c) Promoting and/or working with potable water purveyors to promote the use of drought tolerant, native vegetation to minimize landscape irrigation demands;

(d) Promoting and/or working with potable water purveyors to promote outreach messages that encourage appropriate applications of water needed for irrigation and other watering practices; and,

(e) Implementing the Illicit Discharge Enforcement Response Plan from C.5.b, as necessary, for ongoing, large-volume landscape irrigation runoff to their MS4s.

[56] This connection could be a drain in the pool to the sanitary sewer or a sanitary sewer clean out located close enough to the pool so that a hose can readily direct the pool discharge into the sanitary sewer clean out.

(2) **Reporting** – The Permittees shall provide implementation summaries in their Annual Report.

**vii.** Additional Discharge Types –The Permittees shall identify and describe additional types and categories of discharges not yet listed in Provision C.15.b that they propose to conditionally exempt from Prohibition A.1 in periodic submissions to the Executive Officer. For each such category, the Permittees shall identify and describe, as necessary and appropriate to the category, either documentation that the discharges are not sources of pollutants to receiving waters or circumstances in which they are not found to be sources of pollutants to receiving waters. Otherwise, the Permittees shall describe control measures to eliminate adverse impacts of such sources, procedures and performance standards for their implementation, procedures for notifying the Water Board of these discharges, and procedures for monitoring and record management.

**viii. Permit Authorization for Exempted Non-Stormwater Discharges**

(1) Discharges of non-stormwater from sources owned or operated by the Permittees are authorized and permitted by this Permit, if they are in accordance with the conditions of this provision.

(2) The Water Board may require dischargers of non-stormwater, other than the Permittees, to apply for and obtain coverage under an NPDES permit and to comply with the control measures pursuant to Provision C.15.b. Non-stormwater discharges that are in compliance with such control measures may be accepted by a Permittee and are not subject to Prohibition A.1.

(3) The Permittees may propose, as part of their annual updates consistent with the requirements of Provision C.15.b of this Permit, additional categories of non-stormwater discharges with BMPs, to be included in the exemption to Prohibition A.1. Such proposals may be subject to approval by the Executive Officer as a minor modification of the Permit.

## C.16. Annual Reports

**C.16.a.** The Permittees shall submit Annual Reports electronically and in paper copy upon request by September 15 of each year. Each Annual Report shall report on the previous fiscal year beginning July 1 and ending June 30. The annual reporting requirements are set forth in Provisions C.1 – C.15. The Permittees shall retain documentation as necessary to support their Annual Report. The Permittees shall make this supporting information available upon request within a timely manner, generally no more that ten business days unless otherwise agreed to by the Executive Officer.

**C.16.b.** The Permittees shall collaboratively develop a common annual reporting format for acceptance by the Executive Officer by April 1, 2010. The resulting Annual Report Form, once approved, shall be used by all Permittees. The Annual Report Form may be changed by April 1 of each year for the following annual report, to more accurately reflect the reporting requirements of Provisions C.1 – C.15, with the agreement of the Permittees and by the approval of the Executive Officer.

**C.16.c.** The Permittees shall certify in each Annual Report that they are in compliance with all requirements of the Order. If a Permittee is unable to certify compliance with a requirement, it must submit in the Annual Report the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

## C.17. Modifications to this Order

This Order may be modified, or alternatively, revoked or reissued, before the expiration date as follows:

**C.17.a.** To address significant changed conditions identified in the technical or Annual Reports required by the Water Board, or through other means or communication, that were unknown at the time of the issuance of this Order;

**C.17.b.** To incorporate applicable requirements of statewide water quality control plans adopted by the State Board or amendments to the Basin Plan approved by the State Board; or

**C.17.c.** To comply with any applicable requirements, guidelines, or regulations issued or approved under section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirements of the CWA then applicable.

## C.18. Standard Provisions

Each Permittee shall comply with all parts of the Standard Provisions contained in Attachment K of this Order.

## C.19. Expiration Date

This Order expires on November 30, 2014, five years from the effective date of this Order. The Permittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of waste discharge requirements.

## C.20. Rescission of Old Orders

Order Nos. 99-058, 99-059, 01-024, R2-2003-0021, and R2-2003-0034 are hereby rescinded on the effective date of this Order, which shall be December 1, 2009, provided that the Regional Administrator of USEPA, Region IX, does not object.

## C.21. Effective Date

The Effective Date of this Order and Permit shall be December 1, 2009, provided that the Regional Administrator of USEPA, Region IX, does not object.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 14, 2009.

Digitally signed by Bruce Wolfe
Date: 2009.10.15 17:21:01 -07'00'

Bruce H. Wolfe
Executive Officer

Appendix I: Municipal Regional Stormwater Permit Fact Sheet
Attachment A: Provision C.3.b. Sample Reporting Table
Attachment B: Provision C.3.g. Alameda Permittees Hydromodification Requirements
Attachment C: Provision C.3.g. Contra Costa Permittees Hydromodification Requirements
Attachment D: Provision C.3.g. Fairfield-Suisun Permittees Hydromodification Requirements
Attachment E: Provision C.3.g. San Mateo Permittees Hydromodification Requirements
Attachment F: Provision C.3.g. Santa Clara Permittees Hydromodification Requirements
Attachment G: Provision C.3.h. Sample Reporting Table
Attachment H: Provision C.8. Status & Long-Term Monitoring Follow-up Analysis and Actions
Attachment I: Provision C.8. Standard Monitoring Provisions
Attachment J: Provision C.10. Minimum Trash Capture Areas and Minimum Number of Trash Hot Spots
Attachment K: Standard NPDES Stormwater Permit Provisions

# ACRONYMS & ABBREVIATIONS

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|---|---|
| **ACCWP** | Alameda Countywide Clean Water Program |
| **BAHM** | Bay Area Hydrology Model |
| **Basin Plan** | Water Quality Control Plan for the San Francisco Bay Basin |
| **BASMAA** | Bay Area Stormwater Management Agencies Association |
| **BMPs** | Best Management Practices |
| **CASQA** | California Stormwater Quality Association |
| **CCC** | California Coastal Commission |
| **CCCWP** | Contra Costa Clean Water Program |
| **CDFG** | California Department of Fish and Game |
| **CEQA** | California Environmental Quality Act |
| **CFR** | Code of Federal Regulations |
| **CSBP** | California Stream Bioassessment Procedures |
| **CWA** | Federal Clean Water Act |
| **CWC** | California Water Code |
| **DCIA** | Directly Connected Impervious Area |
| **ERP** | Enforcement Response Plan |
| **FR** | Federal Register |
| **GIS** | Geographic information System |
| **HBANC** | Homebuilders Association of Northern California |
| **HM** | Hydromodification Management |
| **HMP** | Hydromodification Management Plan |
| **IC/ID** | Illicit Connections and Illicit Discharges |
| **IPM** | Integrated Pest Management |
| **LID** | Low Impact Development |
| **MEP** | Maximum Extent Practicable |
| **MRP** | Municipal Stormwater Regional Permit |
| **MS4** | Municipal Separate Storm Sewer System |
| **MTC** | Metropolitan Transportation Commission |

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| **NAFSMA** | National Association of Flood & Stormwater Management Agencies |
| **NOI** | Notice of Intent |
| **NPDES** | National Pollutant Discharge Elimination System |
| **NRDC** | Natural Resources Defense Council |
| **O&M** | Operation and Maintenance |
| **PBDE** | Polybrominated Diphenyl Ether |
| **POTW** | Publicly Owned Treatment Works |
| **RCRA** | Resource Conservation and Recovery Act |
| **RMP** | Regional Monitoring Program |
| **ROWD** | Report of Waste Discharge |
| **RTA** | Rapid Trash Assessment |
| **SARA** | Superfund Amendments and Reauthorization Act |
| **SCURTA** | Santa Clara Urban Rapid Trash Assessment |
| **SCVURPPP** | Santa Clara Valley Urban Runoff Pollution Prevention Program |
| **SFRWQCB** | San Francisco Bay Regional Water Quality Control Board |
| **SIC** | Standard Industrial Classification |
| **SMWPPP** | San Mateo Countywide Water Pollution Prevention Program |
| **SOP** | Standard Operating Procedure |
| **SWAMP** | Surface Water Ambient Monitoring Program |
| **SWPPP** | Stormwater Pollution Prevention Plan |
| **SWRCB** | State Water Resources Control Board |
| **TIE** | Toxicity Identification Evaluation |
| **TMDLs** | Total Maximum Daily Loads |
| **TSCA** | Toxic Substances Control Act |
| **USEPA** | Unites States Environmental Protection Agency |
| **Water Board** | San Francisco Bay Regional Water Quality Control Board |
| **WLAs** | Wasteload Allocations |

# GLOSSARY

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| **Arterial Roads** | Freeways, multilane highways, and other important roadways that supplement the Interstate System. Arterial roads connect, as directly as practicable, principal urbanized areas, cities, and industrial centers. |
| **Beneficial Uses** | The uses of water of the state protected against degradation, such as domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves. |
| **Collector Roads** | Major and minor roads that connect local roads with arterial roads. Collector roads provide less mobility than arterial roads at lower speeds and for shorter distances. |
| **Commercial Development** | Development or redevelopment to be used for commercial purposes, such as office buildings, retail or wholesale facilities, restaurants, shopping centers, hotels, and warehouses. |
| **Construction Site** | Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, paving, disturbances to ground such as stockpiling, and excavation. Construction sites are all sites with disturbed or graded land area not protected by vegetation, or pavement, that are subject to a building or grading permit. |
| **Conditionally Exempted Non-Stormwater Discharge** | Non-stormwater discharges that are prohibited by A.1. of this permit, unless such discharges are authorized by a separate NPDES permit or are not in violation of water quality standards because appropriate BMPs have been implemented to reduce pollutants to the maximum extent practicable, consistent with Provision C.15. |
| **Discharger** | Any responsible party or site owner or operator within the Permittees' jurisdiction whose site discharges stormwater runoff, or a non-stormwater discharge |
| **Detached Single-family Home Project** | The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development. |
| **Development** | Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project (whether single-family, multi-unit, or planned unit development); or industrial, commercial, retail or other nonresidential project, including public agency projects. |
| **Estate Residential Development** | Development zoned for a minimum 1 acre lot size |
| **Emerging Pollutants** | Pollutants in water that either:<br>(1) May not have been thoroughly studied to date but are suspected by the scientific community to be a source of impairment of beneficial uses and/or present a health risk; or<br>(2) Are not yet part of a monitoring program. |
| **Erosion** | The diminishing or wearing away of land due to wind, or water. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs |

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| | naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting. |
| **Full Trash Capture Device** | Full trash capture systems are defined as "any device or series of devices that traps all particles retained by a 5mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the tributary drainage catchment area." Trash collection booms and sea curtains do not meet this definition, but are effective for removal of floating trash if properly maintained. Because these devices do not meet the Full Trash Capture Device definition, only ¼ of the catchment area treated by these measures is credited toward meeting the trash management area requirement of C.10.a. |
| **General Permits** | Waste Discharge Requirements or NPDES Permits containing requirements that are applicable to a class or category of dischargers. The State of California has general stormwater permits for construction sites that disturb soil of 1 acre or more; industrial facilities; `Phase II smaller municipalities (including nontraditional Small MS4s, which are governmental facilities, such as military bases, public campuses, and prison and hospital complexes); and small linear underground/overhead projects disturbing at least 1 acre, but less than 5 acres (including trenching and staging areas). |
| **Grading** | The cutting and/or filling of the land surface to a slope or elevation. |
| **Hydrologic source control measures** | Site design techniques that minimize and/or slow the rate of stormwater runoff from the site. |
| **Hydromodification** | The modification of a stream's hydrograph, caused in general by increases in flows and durations that result when land is developed (e.g., made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding. |
| **Illicit Discharge** | Any discharge to a municipal separate storm sewer (storm drain) system (MS4) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term *illicit discharge* includes all non-stormwater discharges not composed entirely of stormwater and discharges that are identified under Section A. (Discharge Prohibitions) of this Permit. The term illicit discharge does not include discharges that are regulated by an NPDES permit (other than the NPDES permit for discharges from the MS4) or authorized by the Regional Water Board Executive Officer. |
| **Impervious Surface** | A surface covering or pavement of a developed parcel of land that prevents the land's natural ability to absorb and infiltrate rainfall/stormwater. Impervious surfaces include, but are not limited to, roof tops; walkways; patios; driveways; parking lots; storage areas; impervious concrete and asphalt; and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold at least the C.3.d volume of rainfall runoff are not impervious surfaces. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether a project is a Regulated Project under |

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| | Provisions C.3.b. and C.3.g. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling and meeting the Hydromodification Standard. |
| **Industrial Development** | Development or redevelopment of property to be used for industrial purposes, such as factories; manufacturing buildings; and research and development parks. |
| **Infill Site** | A site in an urbanized area where the immediately adjacent parcels are developed with one or more qualified urban uses or at least 75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses and the remaining 25% of the site adjoins parcels that have previously been developed for qualified urban uses and no parcel within the site has been created within the past 10 years. |
| **Infiltration Device** | Any structure that is deeper than wide and designed to infiltrate stormwater into the subsurface, and, as designed, bypass the natural groundwater protection afforded by surface soil. These devices include dry wells, injection wells, and infiltration trenches (includes French drains). |
| **Joint Stormwater Treatment Facility** | A stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects located adjacent to each other, |
| **Local Roads** | Roads that provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas. Local roads offer the lowest level of mobility and usually contain no bus routes. Service to through traffic movement usually is deliberately discouraged in local roads. |
| **Maximum Extent Practicable (MEP)** | A standard for implementation of stormwater management actions to reduce pollutants in stormwater. Clean Water Act (CWA) 402(p)(3)(B)(iii) requires that municipal stormwater permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." Also see State Board Order WQ 2000-11. |
| **Mixed-use Development or Redevelopment** | Development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary. An example is a high-rise building with retail shops on the first 2 floors, office space on floors 3 through 10, apartments on the next 10 floors, and a restaurant on the top floor. |
| **Municipal Separate Storm Sewer System (MS4)** | A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR 122.26(b)(8):<br>(1) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization or a designated and approved management agency under section 208 of the CWA) that discharges into waters of the United States;<br>(2) Designed or used for collecting or conveying stormwater;<br>(3) Which is not a combined sewer; and<br>(4) Which is not part of a Publicly Owned Treatment Works (POTW), as defined in |

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| | 40 CFR 122.2. |
| **Municipal Corporation Yards, Vehicle Maintenance/Material Storage Facilities/** | Any Permittee-owned or -operated facility, or portion thereof, that:<br>(1) Conducts industrial activity, operates or stores equipment, and materials;<br>(2) Performs fleet vehicle service/maintenance including repair, maintenance, washing, or fueling;<br>(3) Performs maintenance and/or repair of machinery/equipment; |
| **National Pollutant Discharge Elimination System (NPDES)** | A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA. |
| **Notice of Intent (NOI)** | The application form by which dischargers seek coverage under General Permits, unless the General Permit requires otherwise. |
| **Parking Lot** | Land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use. |
| **Permittee/Permittees** | Municipal agency/agencies that are named in and subject to the requirements of this Permit. |
| **Permit Effective Date** | The date at least 45 days after Permit adoption, provided the Regional Administrator of U.S. EPA Region 9 has no objection, whichever is later. |
| **Pervious Pavement** | Pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in C.3.d. |
| **Point Source** | Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. |
| **Pollutants of Concern** | Pollutants that impair waterbodies listed under CWA section 303(d), pollutants associated with the land use type of a development, including pollutants commonly associated with urban runoff. Pollutants commonly associated with stormwater runoff include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste) litter and trash. |
| **Potable Water** | Water that is safe for domestic use, drinking, and cooking. |
| **Pre-Project Runoff Conditions** | Stormwater runoff conditions that exist onsite immediately before development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development. |
| **Public Development** | Any construction, rehabilitation, redevelopment or reconstruction of any public agency project, including but not limited to, libraries, office buildings, roads, and |

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| | highways. |
| **Redevelopment** | Land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. |
| **Regional Monitoring Program (RMP)** | A monitoring program aimed at determining San Francisco Bay Region receiving water conditions. The program was established in 1993 through an agreement among the Water Board, wastewater discharger agencies, dredgers, Municipal Stormwater Permittees and the San Francisco Estuary Institute to provide regular sampling of Bay sediments, water, and organisms for pollutants. The program is funded by the dischargers and managed by San Francisco Estuary Institute. |
| **Regional Project** | A regional or municipal stormwater treatment facility that discharges into the same watershed that the Regulated Project does. |
| **Regulated Projects** | Development projects as defined in Provision C.3.b.ii. |
| **Residential Housing Subdivision** | Any property development of multiple single-family homes or of dwelling units intended for multiple families/households (e.g., apartments, condominiums, and town homes). |
| **Retrofitting** | Installing improved pollution control devices at existing facilities to attain water quality objectives. |
| **Sediments** | Soil, sand, and minerals washed from land into water, usually after rain. |
| **Solid Waste** | All putrescible and nonputrescible solid, semisolid, and liquid wastes as defined by California Government Code Section 68055.1 (h). |
| **Source Control BMP** | Land use or site planning practices, or structural or nonstructural measures, that aim to prevent runoff pollution by reducing the potential for contact with rainfall runoff at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff. |
| **Standard Industrial Classification (SIC)** | A federal system for classifying establishments by the type of activity in which they are engaged using a four-digit code. |
| **Stormwater Pumping Station** | Mechanical device (or pump) that is installed in MS4s or pipelines to discharge stormwater runoff and prevent flooding. |
| **Stormwater Treatment System** | Any engineered system designed to remove pollutants from stormwater runoff by settling, filtration, biological degradation, plant uptake, media absorption/adsorption or other physical, biological, or chemical process. This includes landscape-based systems such as grassy swales and bioretention units as well as proprietary systems. |
| **Surface Water Ambient Monitoring Program (SWAMP)** | The State Water Board's program to monitor surface water quality; coordinate consistent scientific methods; and design strategies for improving water quality monitoring, assessment, and reporting. |
| **Total Maximum Daily Loads (TMDLs)** | The maximum amount of a pollutant that can be discharged into a waterbody from all sources (point and nonpoint) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all waterbodies that do not meet water quality standards even after application of technology-based controls, |

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| | more stringent effluent limitations required by a state or local authority, and other pollution control requirements such as BMPs. |
| **Toxicity Identification Evaluation (TIE)** | TIE is a series of laboratory procedures used to identify the chemical(s) responsible for toxicity to aquatic life. These procedures are designed to decrease, increase, or transform the bioavailable fractions of contaminants to assess their contributions to sample toxicity. TIEs are conducted separately on water column and sediment samples. |
| **Trash and Litter** | Trash consists of litter and particles of litter. California Government Code Section 68055.1 (g) defines litter as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing. |
| **Treatment** | Any method, technique, or process designed to remove pollutants and/or solids from polluted stormwater runoff, wastewater, or effluent. |
| **Waste Load Allocations (WLAs)** | A portion of a receiving water's TMDL that is allocated to one of its existing or future point sources of pollution. |
| **Water Quality Control Plan (Basin Plan)** | The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State within the Region, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives and discharge prohibitions. The Basin Plan was duly adopted and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required. The latest version is effective as of December 22, 2006. |
| **Water Quality Objectives** | The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent pollution problems within a specific area. Water quality objectives may be numeric or narrative. |
| **Water Quality Standards** | State-adopted and USEPA-approved water quality standards for waterbodies. The standards prescribe the use of the waterbody and establish the water quality criteria that must be met to protect designated uses. Water quality standards also include the federal and state anti-degradation policy. |
| **Wet Season** | October 1 through April 30 of each year |

# APPENDIX I

# MUNICIPAL REGIONAL STORMWATER PERMIT

# FACT SHEET

# FACT SHEET/RATIONALE
# TECHNICAL REPORT

## for

# ORDER NO. R2-2009-0074

# NPDES Permit No. CAS612008

# Municipal Regional Stormwater NPDES Permit
## and
## Waste Discharge Requirements

## for

**The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program**

**The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program**

**The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program**

**The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program**

**The cities of Fairfield and Suisun City, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program**

**The City of Vallejo and the Vallejo Sanitation and Flood Control District**

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# I. CONTACT INFORMATION

Water Board Staff Contact: Dale Bowyer, 1515 Clay Street, Suite 1400, Oakland, CA 94612, 510-622-2323, 510-622-2501 (fax), email: dbowyer@waterboards.ca.gov

The Permit and other related documents can be downloaded from the Water Board website at: http://www.waterboards.ca.gov/sanfranciscobay/mrp.htm

Comments can be electronically submitted to mrp@waterboards.ca.gov.

All documents referenced in this Fact Sheet and in the Order are available for public review at the Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 9:00 am to 4:00 pm, Monday through Friday, 12 - 1 pm excluded. Per the Governor's order calling for furloughs, the Water Board office will be closed the first three Fridays of each month through June 2010. To schedule an appointment to inspect public records, contact Melinda Wong at 510-622-2430.

# II. PERMIT GOALS AND PUBLIC PROCESS

## Goals

The Goals for the Municipal Regional Stormwater Permit (hereinafter, the Permit) Development Process include:

1. Consolidate six Phase I municipal stormwater NPDES permits into one consistent permit which is regional in scope.
2. Include more specificity in NPDES permit order language and requirements. Create (A) required stormwater management actions, (B) a specific level of implementation for each action or set of actions, and (C) reporting and effectiveness evaluation requirements for each action sufficient to determine compliance.
3. Incorporate the Stormwater Management Plan level of detail and specificity into the Permit. Stormwater Management Plans have always been considered integral to the municipal stormwater NPDES permits, but have not received the level of public review in the adoption process necessary relative to their importance in adequate stormwater pollutant management implementation.
4. Implement and enhance actions to control 303(d) listed pollutants, pollutants of concern, and achieve Waste Load Allocations adopted under Total Maximum Daily Loads.
5. Implement more specific and comprehensive stormwater monitoring, including monitoring for 303(d) listed pollutants.

## Public Process

Water Board staff conducted a series of stakeholder meetings and workshops with the Permittees and other interested parties to develop this Permit over the past 3 years. These meetings included Water Board staff, representatives of the Permittees, representatives of