WDID 1 49S013116

**Reporting: Are most reports designed to be input into SMARTS?**

**Sonoma State University is a Non-Traditional Small MS4 Within Urbanized Area(**40 CFR 122.26(b)(8))

**A. APPLICATION**

Sonoma State University has applied for small MS4 status.

A.1. Small MS4 Permittees

 a. Permittee shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board within six months of the General Permit effective date. If the Permittee was designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:

1) NOI via SMARTS

2) Appropriate Fee (in accordance with the most recent fee schedule6)

3) Permit boundary map 4) Guidance document: The document shall at least include the following: (a) Overall planning

(b) Identify all permit requirements and responsible implementing parties

A.3. Waiver Certification

Regulated Small MS4s may seek a waiver from the General Permit requirements if they meet criteria specified in 40 CFR §122.32(c)-(e) or additional criteria specified in A.3.b.(3) below.

(e) The NPDES permitting authority may waive permit coverage if your MS4 serves a population under 10,000 and you meet the following criteria:

(1) The permitting authority has evaluated all waters of the U.S., including small streams, tributaries, lakes, and ponds, that receive a discharge from your MS4;

(2) For all such waters, the permitting authority has determined that storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or, if a TMDL has not been developed or approved, an equivalent analysis that determines sources and allocations for the pollutant(s) of concern;

(3) For the purpose of this paragraph (e), the pollutant(s) of concern include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from your MS4; and (4) The permitting authority has determined that future discharges from your MS4 do not have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

In order for a Regional Water Board to waive requirements for a Regulated Small MS4, (1) the Regulated Small MS4 must certify that its discharges do not cause or contribute to, or have the potential to cause or contribute to, a water quality impairment, and (2) the Regulated Small MS4 must meet one of the waiver options in section b below:

a. Waiver Certification Application Requirements - A Waiver Certification will only be in effect upon completion of the following:

1. Annual Waiver Certification submitted via SMARTS.

2. Annual Waiver Certification renewal fee of $200 plus any applicable surcharge.

3. Letter via SMARTS from Regional Water Board or its Executive Officer waiving requirements.

Requirements are automatically waived if the Regional Water Board does not respond within six months.

b. Waiver Criteria

(1) Option 1

(a) The jurisdiction served by the system is less than 1,000 people;

(b) The system is not contributing substantially to the pollutant loadings of a physically interconnected regulated MS4s

 (c) If the small MS4 discharges any pollutants identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on waste load allocations that are part of

an EPA approved or established TMDL that addresses the pollutant(s) of concern.

(2) Option 2

(a) The jurisdiction served by the system is less than 10,000 people;

(b) The Regional Water Board has evaluated all waters of the U.S. that receive a discharge from the system;

(c) The Regional Water Board has determined that storm water BMPs are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or an equivalent analysis; and

(d) The Regional Water Board has determined that future discharges from the Regulated Small MS4 do not have the potential to result in exceedances of water quality standards.

**B. DISCHARGE PROHIBITIONS**

1. Discharges of waste that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

2. Discharges of storm water to waters of the U.S. in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code § 13050 are prohibited.

3. Discharges of material other than storm water to waters of the U.S. or another permitted MS4 shall be effectively prohibited.

Authorized non-storm water discharges:

1. Water line flushing. Flushed water shall be directed to the landscape for infiltration and done in a manner that reduces soil erosion or generation of sediment.

2. Diverted stream flows. On campus streams cannot be diverted without prior authorization from CA Fish & Game.

3. Rising ground waters.

4. Uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20))to separate storm sewers.

5. Uncontaminated pumped ground water. Flooded utility vaults may be pumped to landscape or adjacent storm water vaults as needed.

6. Discharges from potable water sources. Campus wells.

7. Foundation drains. Darwin & Stevenson.

 8. Air conditioning condensation

 9. Water from crawl space pumps.

10. Footing drains. Darwin & Stevenson.

11. Flows from riparian habitats and wetlands

12. Dechlorinated swimming pool discharges. PE Pool discharges to leachfield.

13. Incidental runoff of potable or recycled water from landscaped areas. Discharges of Incidental Runoff shall be controlled. Incidental runoff is defined as unintended amounts of runoff from potable and recycled water use areas, such minimal over-spray from sprinklers that escapes the area of intended use. Water leaving an intended use area is not considered incidental if it is part of the facility design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence.

SSU shall control incidental runoff by:

a. Detecting and correcting leaks within 72 hours of learning of the leak.

b. Properly designing and aiming sprinkler heads,

c. Not irrigate during precipitation events,

d. Manage ponds containing recycled water such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater, and the appropriate Regional Water Board is notified by email no less than four hours prior to the discharge.

e. Any other actions necessary to prevent the discharge of incidental runoff to the

MS4 or waters of the U.S.

Non-storm water discharge runoff that is not incidental is prohibited, unless otherwise specified in Section B.3 above.

Incidental runoff may be regulated by waste discharge requirements or, where necessary, waste discharge requirements that serve as a NPDES permit, including MS4 permits.

**C. EFFLUENT LIMITATIONS**

1. Discharge of pollutants shall be in conformance with MEP and TMDL waste load allocations (WLAs) established for discharges.

2. Storm water discharges shall not contain a hazardous substance in amounts equal to or in excess of a reportable quantity listed in 40 CFR Part 117 or 40 CFR Part 302.

**D. RECEIVING WATER LIMITATIONS**

Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan.

SSU shall comply with Receiving Water Limitations through timely implementation of control measures/BMPs and other actions to reduce pollutants in the discharges and other requirements of this Order including any modifications. The storm water program shall be designed to achieve compliance with Receiving Water Limitations. If exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of other storm water program requirements of

 this Order, the Permittee shall assure compliance with Receiving Water Limitations by complying with the following procedure:

1. Upon a determination by either the Permittee or the Regional Water Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the Regional Water Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Board may require modifications to the report;

2. Submit any modifications to the report required by the Regional Water Board within

30 days of notification;

3. Implement the actions specified in the report in accordance with the approved schedule.

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

**BEST MANAGEMENT PRACTICES**

Runoff from artifact rinsing and straining; Anthropology Studies Building. Small amounts of non-hazardous sediments on artifacts are rinsed and strained into a small detention basin.

Solid waste storage bins (dumpsters); Zinfandel Food Services & Commons East Loading Dock. These bins have more liquids from food waste and managed with greater care. Food waste is bagged and lids are kept closed.

Application of aquatic herbicides during overflow conditions; Campus Lakes. The Director of Landscaping notifies EHS and the Supervising Building Engineer what materials will be applied to the lake, how much, and when so that the SBSE can block inflows to the lake. EHS samples the lakes when they are expected to be below water quality criteria. The SBSE is then notified that inflows and resulting outflows can be returned to maintain the lake levels.

Washing kitchen floor mats; Zinfandel Food Services Loading Dock Area. An indoor wash rack was installed and is currently used at the loading dock location.

Recycled water from fire water system testing and maintenance; Fire Hydrant Locations. Recycled water is discharged to the landscape for infiltration during the dry season.

University garbage truck rinseate; Garbage truck. A liquid reservoir tank installed on the truck captures liquid for disposal at the landfill. Liquid waste is discharged to the sanitary sewer via the wash down rack if necessary.

Contractor activity on new construction sites; Various Sites. See Construction Storm Water Plan.

**E. PROVISIONS FOR ALL TRADITIONAL SMALL MS4 PERMITTEES**

Non-Traditional Small MS4s Permittees shall comply with Section F of this Order.



Both Traditional and Non-traditional Small MS4s Permittees that discharge to ASBS as listed on Attachment D shall comply with Attachment C in addition to all other applicable provisions of this Order.

Permittees, both Traditional and Non-traditional Small MS4s, may rely on a SIE to satisfy one or more of the permit obligations, if the SIE can appropriately and adequately address the storm water issues of the Permittee. The SIE must agree to implement the BMPs, or components thereof, to achieve compliance with the Order. If the SIE fails to implement the BMPs, the Permittee remains responsible for compliance with this Order.

**F.1 Non-Traditional Small MS4 Categories**

Sonoma State University shall comply with the specific provisions in this Section.

**F.2 Security Concerns**

Sonoma State University has a police department with sworn officers on duty 24 hours per day, seven days per week.

**F.3 Maximize Efficiency**

SSU incorporates the storm water provisions into existing programs and trains and utilizes existing staff to implement BMPs, recognize and report unauthorized discharges, and respond to uncontrolled releases.

**F.4 Equivalent or Existing Document**

Sonoma State University maintains the following documents that further protection of storm water on campus:

Storm Water Pollution Prevention Plan

Spill Prevention, Control, and Countermeasures Plan (SPCC)

Emergency Response Contingency Plan for Hazardous Materials Releases

Construction Storm Water Management Plan

**F.5. MANAGEMENT ELEMENT F.5.a.1 Legal Authority**



(i) **Task Description** – SSU has adequate legal authority to meet the requirements of this Order

(ii) **Implementation Level** – Within the second year of the effective date of the permit, SSU shall review, revise or adopt new relevant policies, contractual provisions, base orders, resolutions or other regulatory mechanisms to ensure it has at a minimum the legal authority to:

(a) Prohibit and eliminate non-storm water discharges to the MS4.

These are currently controlled under the fully implemented BMP’s.

(b) Prohibit and eliminate illicit discharges and illegal connections to the MS4.

Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including, but not limited to discharges from mobile cleaning and pressure washing operations.

SSU has full control over discharges and potential illegal connections to the MS4.

(c) Respond to spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

EHS personnel are the primary responsders to hazardous materials releases or non-storm water discharges. Additional Facilities Services personnel may be called on to assist by providing labor or equipment (pumps, tools, wattles, filter fabric, etc.).

BMP’s for non-storm water discharges:

Sediment flowing into storm drains:

Control source of sediment (containment, berms, etc.)

Redirect flow to basin areas.

Apply filter fabric to storm drain inlets.

(d) Require vendors and contractors to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of BMPs consistent with the California Storm Water Quality Association (CASQA) Best Management Practice Handbooks or equivalent.

Standard storm water contract language included with projects that may impact storm water (Appendix X)

(e) Ensure construction sites provide a Waste Discharge Identification Number for coverage under the CGP and IGP and comply with the appropriate permit.

(1) Review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction).

Provided for under construction permit.

 (f) Promptly cease and desist discharges and/or cleanup and abate a discharge, including the ability to:

(1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 48 hours of notification;

EHS works with SSU Police Services (sworn officers) to hold illicit discharges responsible for their releases. At any time, Police Services notifies EHS for significant releases that are actively entering the storm drain or have the potential to enter the storm drain if not responded to.

BMP: Automobiles leaking battery acid, antifreeze, oil, or hydraulic fluid on campus will be tagged for repair and directed to be moved off-site for repair before returning to campus. EHS provides cleanup and mitigation service for initial leaks during the day shift. Police Services provides spill control for leaking vehicles identified after hours. Repeat offenders are cited by Police Services with possible towing.

(2) Require abatement, within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;

Threats to the storm water system are abated immediately.

(3) Perform the cleanup and abatement work and bill the responsible party, if necessary;

SSU may absorb the cost of incidental or accidental spills by third parties. Deliberate or negligent releases of hazardous materials may be referred to law enforcement for cost recovery.

(4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;

EHS has the authority to prohibit any activity that threatens storm water quality. In extreme cases, SSU Police Services could be called upon to enforce any condition deemed necessary by EHS.

(5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

EHS will notify the Regional Water Board within five business days via email if storm water quality is significantly impacted. Releases that have not entered the storm drain will be documented internally. BMP’s will be adopted or modified as necessary.

(iii) **Reporting** – SSU shall submit by the first year online Annual Report, a statement signed by both the SSU’s legal counsel and an authorized signatory certifying SSU has adequate legal authority in accordance with 40 CFR 122.26(d)(2)(i)(A-F) [Same as five items above] to comply with all Order requirements.

**F.5. EDUCATION AND OUTREACH PROGRAM F.5.b.1.Compliance Participation Options**



All Permittees shall comply with the requirements in this Section by participating in one or more of the following:

(i) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts education and outreach on behalf of its members; or

(ii) Contributing to a regional education and outreach collaborative effort (a regional education and outreach collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional education and outreach. Regional education and outreach collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes. Then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or

(iii) Fulfilling education and outreach requirements within their jurisdictional boundaries on their own; or

What is the standard in terms of frequency, content, or distribution?

(iv) A combination of the previous options, so that all requirements are fulfilled.

**Reporting** – By the first year online Annual Report, the Permittee shall identify which compliance participation option it will use to comply with the public education and outreach requirements in this Section. ~~For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee shall include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.~~

**F.5.b.2.Public Education and Outreach**

The public for a Non-traditional MS4 Permittee is considered the following, if applicable:

Faculty



personnel Residents Students

Staff

Visitors

(i) **Task Description –** The Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to inform the public about storm water pollution and steps that can be taken to reduce storm

water pollution. The Public Education and Outreach Program shall (1) measurably increase the public’s knowledge regarding the storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences.

(ii) **Implementation Level** – SSU shall, at a minimum:

(a) Within the second year of the effective date of the permit, the Permittee shall develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and

anticipated task effectiveness.

The strategy must include identification of who is responsible for implementing specific tasks, a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in their jurisdiction or local pollutants of concern are addressed.

Chart with these items in Appendix X.

(b) Implement BMPs that gauge level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey of a specific storm water message that focuses on the following:

(1) Local pollutants of concern

Sediment, leaking autos, hot water loops, sanitary sewer

(2) Target audience

Facilities Staff, BMP affected staff, students

(3) Regional water quality issues

 (d) Develop and disseminate appropriate educational materials in multiple languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(e) Distribute educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

Most educational materials developed by EHS will be made available on the EHS web page.

(f) ~~Develop and convey messages to explain the benefits of water-efficient landscaping (if appropriate);~~

~~(g) Utilize information from storm water-friendly landscaping24 programs (if appropriate);~~

(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities;

Infrequent hazardous waste dumping on campus doesn’t warrant public message other than for Police Services to be aware of locations.

(k) Reduce discharges from pressure washing operations and landscape irrigation.

Ed Task chart (Appendix X)

(iii) **Reporting** – By the third year Annual Report and annually thereafter, complete and have available information on the public education strategy and general program development and progress. By the fifth year Annual Report, summarize changes in public awareness and knowledge resulting from the implementation of the program and any modifications to the public education and outreach program. If applicable, complete and have available a report on development of

 education materials, methods for educational material distribution, public input, Water Efficient Landscape Ordinance, ~~elementary school education~~, reduction of discharges from mobile cleaning and pressure washing operations, and landscape irrigation efforts. Complete and

have available an annual report of the number of trainings and the study and results to date.

STAR

Newsbytes

Campuswide e-mail

**F.5.b.3. Staff and Site Operator Training and Education**

**Illicit Discharge Detection and Elimination Training**

(i) **Task Description** – Permittees shall develop and implement a training program for all Permittee staff, who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illicit connection to the storm drain system.

Safety Seminar for new employees

Online training

Field Training

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall develop the training program. The training program shall include at a minimum:

(a) Identification of an illicit discharge or connection.

(b) Proper procedures for reporting and responding to the illicit discharge or connection.

(c) Follow-up training provided as needed to address changes in procedures, techniques, or staffing.

(d) Annual assessment of their trained staff’s knowledge of illicit

discharge response and shall provide refresher training as needed.

(e) Training of new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illicit connection.

(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee’s fleet vehicles that are used by field staff.

Modify training to include these elements.

(iii) **Reporting** - The Permittee shall document and maintain records of the training provided and the staff trained annually.

Safety Seminar – Records at Facilities, Cindy

**F.5.b.4. Staff Pollution Prevention and Good Housekeeping**

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – The Permittee shall provide an annual training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations sections of this General Permit.

Develop as one page BMP’s (e.g. filter fabric and power washing)

 (ii) **Implementation Level** – The annual training program shall include the following:

(a) General storm water education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. Clear guidance on appropriate storm water BMPs to use at Permittee owned facilities and during typical Operation and Maintenance activities.

(b) An assessment of trained staff’s knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

Pre- or post-training quiz.

(c) A requirement that any contractors hired by the Permittee to perform Operation and Maintenance activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating

procedures described above.

Existing contractor guidelines as Appendix X.

The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting –** By the second year Annual Report and annually thereafter, complete and have available a summary of oversight procedures and identify and track all personnel requiring training and assessment and records.

Employees requiring training list (Cindy).

**F.5. . PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM**



(i) **Task Description -** The Permittee shall involve it’s public in the planning and implementation of activities related to the development and implementation of the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community.

ENSP, Biology, Chemistry student interns and research.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall, at a minimum:

(a) ensure that high foot traffic storm drain inlets include a labeled or stenciled storm water awareness message such as “drains to creek” or “only rain in the drain”

(b) integrate storm water awareness messages and information on a publicly accessible website

(iii) **Reporting –** By the third year Annual Report and annually thereafter, complete and have available a description of the public involvement program and summary of the MS4s efforts related to facilitating public involvement.

**F.5. . ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM**



The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate non-storm water discharges, including illegal dumping, into its system.

**Outfall Mapping**

(i) **Task Description** - The Permittee shall maintain an up-to-date and accurate outfall map. The map may be in hard copy and/or electronic form or within a geographic information system (GIS). The Permittee shall conduct outfall mapping during the dry season27.

Completed map (Appendix X).

(ii) **Implementation Level** - The outfall map shall at a minimum show:

(a) The location of all outfalls and drainage areas contributing to those outfalls that are operated by the Permittee, and that discharge within the Permittee’s jurisdiction to a receiving water

Add drainage areas layers.

(b) The location (and name, where known to the Permittee) of all water bodies receiving discharges from those outfall pipes. Each mapped outfall shall be given an individual alphanumeric identifier, which shall be noted on the map. Photographs shall be taken to provide

baseline information and track operation and maintenance needs over time.

Adjust for Copeland and Hinebaugh accordingly. Outfall photos.

(iii) **Reporting** –By second year Annual Report complete and have available map.

**F.5.d.1.Field Sampling to Detect Illicit Discharges**

(i) **Task Description** – While conducting the outfall inventory (one time? During each outfall observation?) under Section

B.4.a, the Permittee shall sample any outfalls that are flowing.

One time? Inventory already complete. Dry season?

(ii) **Implementation Level** – The Permittee shall:

(a) Conduct monitoring for the following indicator parameters to help determine the source of the *illicit discharge*(Is this only for illicit discharges or routine ones as well?)

**Appendix X**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicator Parameters Used to Detect Illicit Discharges** | | | | | |
| **Parameter** | **Discharge Types It Can Detect** | | | |  |
| **Sewage** | **Washwater** | **Tap**  **Water** | **Industrial or** |  |
| **Commercial**  **Liquid Wastes** | **Laboratory/Analytical Challenges** |
| Ammonia |  |  |  |  | Can change into other nitrogen forms as the ﬂow travels to the outfall |
| Color |  |  |  |  |  |
| Conductivity |  |  |  |  | Ineffective in saline waters |
| Detergents –  Surfactants |  |  |  |  | Reagent is a hazardous waste |
| Fluoride\* |  |  |  |  | Reagent is a hazardous waste Exception for communities that do not ﬂuoridate their tap water |
| Hardness |  |  |  |  |  |
| pH |  |  |  |  |  |
| Potassium |  |  |  |  | May need to use two separate analytical techniques, depending on the concentration |
| Turbidity |  |  |  |  |  |
|  Can almost always (>80% of samples) distinguish this discharge from clean ﬂow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.   Can sometimes (>50% of samples) distinguish this discharge from clean ﬂow types depending on regional characteristics, or can be helpful in combination with another parameter   Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water N/A: Data are not available to assess the utility of this parameter for this purpose. Data sources: Pitt (this study)  \*Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water. | | | | | |

What level of sensitivity for these tests? (e.g. Can nitrogen test strips be used for nitrate, nitrite, ammonia? Visual color determination? What standard to compare to (e.g. upstream values, drinking water, other flows)?

(b) Verify that indicator parameters with the following action level concentrations are not exceeded.

**Action level concentrations for Indicator Parameters**

|  |  |
| --- | --- |
| **Indicator**  **Parameter** | **Action Level Concentration** |
| Ammonia | >= 50 mg/L |
| Color | >= 500 units |
| Conductivity | >= 2,000 μS/cm |
| Hardness | <= 10 mg/L as CaCO3 or >= 2,000 mg/L  as CaCO3 |
| pH | <= 5 or >=9 |
| Potassium | >= 20 mg/L |
| Turbidity | >= 1,000 NTU |

(c) Identify areas of potential follow up actions (e.g. outfall monitoring “up-pipe” of the discharge) if the action level concentrations are exceeded.

(iii) **Reporting** – By second year Annual Report, complete and have available a report summarizing the field investigation results and areas of follow up actions. The report shall summarize all applicable observations.

How does “illicit” discharge compare with accidental releases? Illicit implies an ongoing and deliberate discharge vs. accidental releases that primarily occur on campus. Do we need to speak to the issue of illicit discharges?

**F.5.d.2. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions**

(i) **Task Description** - The Permittee shall develop written procedures for conducting investigations into the source of all identified prohibited non-storm water discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any prohibited non-storm water discharge within 72 hours of becoming aware of the prohibited non-storm water discharge.

All suspected non-storm water discharges will be immediately investigated by EHS or Facilities Services.

(a) Non-storm water discharges suspected of being sanitary sewage and/or significantly contaminated shall be investigated first.

(b) Investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows may be delayed until after all suspected sanitary sewage and/or significantly contaminated discharges have been investigated, eliminated and/or resolved.

 (c) Report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to local Health Department.

(d) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under the General Permit, no further action is required.

(e) Corrective Action to Eliminate Non-Storm Water Discharge – Once the source of the non-storm water discharge has been determined, the Permittee shall immediately notify the responsible party of the problem.

(iii) **Reporting** – Complete and have available annually, all source investigations and corrective actions. At a minimum the report shall include:

(a) Date(s) the non-storm water discharge was observed; (b) Results of the investigation;

(c) Date the investigation was closed.

(d) A summary of all non-storm water discharges that were found.

Investigation Form in Appendix X (or format for email).

**F.5.e. CONSTRUCTION SITE RUNOFF CONTROL PROGRAM**

The Permittee shall develop, implement, and enforce a program to prevent Construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of contract language ensuring the Permittee’s in-house construction operators or outside contractors comply with the CGP.

(i) **Task Description -** Each Permittee shall develop and implement contract language ensuring all outside contractors comply with the CGP and implement appropriate BMPs. Contract language shall apply to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(ii) **Implementation Level** – Within the first year of the effective date of the permit, the Permittee shall include CGP compliance requirements in construction contract language for all project one acre or more projects or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available updated contract language that includes CGP compliance requirements for all projects subject to the CGP.

**F.5. . POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM**



The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations. Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

**F.5.f.1.Inventory of Permittee-Owned or Operated Facilities**

(i) **Task Description** - Prepare an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality.

(ii) **Implementation Level** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an the inventory that shall include facilities that may impact storm water.

Inventory of Permittee Facilities potential impact on storm water (Appendix X).

(iii) **Reporting** – By the second year Annual Report and annually thereafter complete and have available an updated inventory.

**F.5.f.2. Map of Permittee-Owned or Operated Facilities**

(i) **Task Description –**Prepare and submit a map of the urban area covered by the MS4 permit and identify where the Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - Within the second year of the effective date of the permit, the Permittee shall complete and have available a map that identifies the storm water drainage system corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information.

Maps as Appendix X

(i) **Reporting** - By the second year Annual Report and annually thereafter, complete and have available the map.

**F.5.f.3. Facility Assessment**

(i) **Task Description** –Conduct an inspection and assessment of pollutant discharge potential and pollutant hotspots.

(ii) **Implementation Levels** - Within the third year of the effective date of the permit, the Permittee shall conduct an annual review and assessment of all owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots based on the assessment, the Permittee shall identify as pollutant hotspots those facilities that have a high potential to generate storm water and non-storm water pollutants. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee’s maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

Link map, BMP’s, and photos of improper and proper procedures (canopy, grounds, etc)

(b) Documentation of the assessment procedures and results. The Permittee shall document the procedures it uses for conducting the assessment along with a copy of any site evaluation checklists used to conduct the assessment.

Prepare checklist or storm water inspection form: for inspection by managers, EHS, or self-reported?

(iii) **Reporting** – By the third year Annual Report, complete and have available the results of the Permittee’s annual assessment, any identified deficiencies and corrective actions taken, list of the pollutant hotspots.

**F.5.f.4. Storm Water Pollution Prevention Plans**

(i) **Task Description** – the Permittee shall develop and implement SWPPPs for pollutant hotspots at high priority sites. If a Permittee has an existing or equivalent document such as Hazardous Materials Business Plan or Spill Prevention Plan, the Permittee is not required to develop a SWPPP if that document includes the necessary information required within a SWPPP.

HMBP, SPCC, HazMat Emergency, and SWPPP all current.

(ii) **Implementation Level** – Within the fourth year of the effective date of this permit, the Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in storm water.

Done

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities’ offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)

2) Purpose of the document

3) Key staff/contacts at the facility

4) Site map with drainage identified

5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water

6) Description of potential pollutant sources

7) BMPs employed at facility

8) Spill control and cleanup – response to spills

 (iii) **Reporting** – By the fourth year Annual Report and annually thereafter, complete and have available a summary of SWPPPs developed and updated for pollutant hotspots.

**F.5.f.5. Inspections, Visual Monitoring and Remedial Action**

(i) **Task Description** –The Permittee shall conduct regular inspections of Permittee-owned and operated facilities. The Permittee may incorporate storm water inspections into existing, routine facility inspections.

(ii) **Implementation Level** – Within the fifth year of the effective date of the permit, the Permittee shall conduct inspections as follows:

a) Quarterly hotspot visual inspections – Perform quarterly visual inspections in accordance with the developed standing operating procedures of all hotspot Permittee-owned or operated facilities to ensure materials and equipment are clean and orderly, to minimize the potential for pollutant discharge, and to ensure implementation of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility,

and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

Prepare hotspot visual inspection forms and schedule for completion.

b) Quarterly Hotspot comprehensive inspections – At least once per quarter, a comprehensive inspection of hotspot facilities, including all storm water

BMPs, shall be performed, with specific attention paid to the following, but not limited to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results shall be documented and records kept with the SWPPP. This inspection shall be performed in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

Form. Who completes? PM?

c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter, visually observe discharge location from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant

sources or BMPs shall be remedied within seven days or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

Same as existing IP. Are other using the old forms?

d) Non-Hotspot Inspection – At a minimum, inspect each inventoried facility that is not a hotspot, once per permit term. The inspection shall investigate and assess each of the items identified above.

Where EHS or possibly other trained staff routinely travel on campus, would this constitute inspection? Or formal, dedicated inspection?

(iii) **Reporting** – By the fifth year Annual Report and annually thereafter, the following information shall be completed and made available:

 (a) Total number of facilities required to be inspected.

(b) Total number of facilities inspected (visual and comprehensive inspections) and frequency of inspections

(c) Summary of spills and corrective actions

(d) Results of the quarterly visual observations of storm water discharges

**F.5.f.6 Storm Drain System Assessment and Prioritization**

(i) **Task Description** –The Permittee shall develop and implement procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving waterbodies within the Permittee's urbanized area and detention basins.

(ii) **Implementation Level** – Within the second year of the effective date of the permit, the Permittee shall

(a) Assess/prioritize catch basins– Assign a priority to all catch basins within the Permittee's urbanized areas as consistently generating high, medium, and low volumes of trash and/or debris.

Develop map layer with this information.

(iii) **Reporting** *–* By the second year Annual Report, complete and have available procedures and prioritization list.

**F.5.f.7 Maintenance of Storm Drain System**

(i) **Task Description** –The Permittee shall begin maintenance of all high priority storm drain systems at least annually prior to the rainy season.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall begin a maintenance program of high priority storm drain systems that, at a minimum includes:

(a) Storm drain systems inspection – Based on the priorities assigned above, develop a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all catch basins of high priority systems annually, prior to the rainy season.

Prepare inspection form or record. PM?

(b) Storm drain cleaning – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

Root intrusion? Camera inspection of critical lines?

(c) Maintenance of surface drainage structures –Visually monitor all Permittee- owned open channels, detention basins, and other drainage structures for debris at least once per year and identify and prioritize problem areas. At a minimum, removal of trash and debris from open channels and other drainage structures shall occur annually.

(e) Disposal of waste materials - Develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

No material extracted from catch basins to date.

(iii) **Reporting** – By the third year Annual Report, complete and have available a summary of the following information:

(a) Storm sewer maintenance schedule

(b) List of storm sewer systems and the priority assigned

(c) Documentation of all required storm sewer systems maintenance logs

(d) Documentation of waste material disposal procedure

**F.5.f.8.Permittee Operations and Maintenance Activities (O&M)**

(i) **Task Description –**The Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all BMPs on a quarterly basis.

(ii) **Implementation Level** - Within the third year of the effective date of the permit, the Permittee shall:

(a) Develop and implement O&M activity assessment. The O&M activities assessment shall include, but not be limited to, the potential to discharge pollutants in storm water:

Develop inspection form or checklist as documentation.

(b) Identify all materials that could be discharged from each of these O&M

activities.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce the discharge of pollutants in storm water. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate annually all BMPs implemented during O&M activities

(iii) **Reporting** – By the third year Annual Report, complete and have available the following:

(a) List of BMPs and associated pollutants with each O&M activity

(b) BMPs applied during Permittee O&M activities

(c) Log of annual BMP evaluations.

(d) Documentation of high priority designated facilities maintained.

**F.5.f.9 Pesticide, Herbicide, and Fertilizer Application and New Landscape**

**Design and Maintenance Management**

(i) **Task Description** –The Permittee shall implement a program which focuses on pollution prevention, source control BMPs, and landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during their Permittee operations and activities. The Permittee shall implement the landscape design and maintenance on new or decorative landscapes.

(ii) **Implementation Tasks** – Within the second year of the effective date of the permit, the Permittee shall implement the following:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed to identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers (based upon B.6.i(ii)(a)). At a minimum the Permittee shall do the following, but not limited to:

(1) Educate applicators and distributors of storm water issues.

(2) Implement integrated pest management measures that rely on non- chemical solutions, including:

a) Use of native and climate appropriate plants (reduces water usage and fertilization) for decorative landscape applications

b) Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling

c) Preventing application of pesticides and fertilizers when two or more consecutive days with greater than 50% chance of rainfall are predicted by NOAA28

d) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal)

e) Limiting or eliminating the use of fertilizers, including prohibiting application within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body

f) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety

(3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.

(4) Minimize irrigation run-off

(iii) **Reporting** - By the second year Annual Report, complete and have available an evaluation of materials used and activities performed for pollution prevention and source control opportunities and a list of practices implemented to minimize the use

28 [www.srh.noaa.gov/forecast](http://www.srh.noaa.gov/forecast)

 of herbicide, pesticide, and fertilizers. By the second year Annual Report, complete and have available a document identifying the measures that the Permittee will use to demonstrate reductions in the application of pesticides, herbicides, and fertilizers. In subsequent annual reports, use this measure to demonstrate reductions in pesticide, herbicide, and fertilizer application.

To Sam for review and development.

**F.5. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM Post-Construction Treatment Measures**



All Permittees shall implement post-construction treatment measures for new and redevelopment projects and comply with the following Sections below:

Site Design Measures



Low Impact Development Runoff Standards

Implementation Strategy for Watershed Process Management Operation and Maintenance of Post Construction Storm Water Management Measures

**Reporting –** By the third year Annual Report, all Permittees shall complete and have available an inventory of projects subject to post-construction treatment measures for new and redevelopment projects.

**Hydromodification Measures**

All Permittees shall implement post-construction hydromodification measures and comply with the following Sections below:

Hydromodification Management 29



Operation and Maintenance of Post Construction Storm Water

Management Measures

**Reporting -**

1. Permittees located within a Phase I MS4 permit boundary with a Regional Water Board approved Hydromodification Plan shall complete and have available a summary report in the year one Annual Report describing the strategies to implement and coordinate with the surrounding Phase I MS4 Permittee Hydromodification Plan. In subsequent Annual Reports, the Permittee shall complete and have available an inventory of projects subject to the surrounding Phase I MS4 Hydromodification Plan requirements.

29 Permittees located within a Phase I MS4 permit boundary with a Regional Water Board approved Hydromodification Plan shall implement the Hydromodification Plan requirements for region-wide hydromodification consistency. The Permittee shall develop a summary report describing the strategies to implement and coordinate with the outlying Phase I MS4 Permittee Hydromodification Plan.

 2. By the third year Annual Report, Permittees located within a Phase I MS4 permit boundary without a Regional Water Board approved Hydromodification Plan or where a plan does not exist shall have available an inventory of the projects subject to this Section.

3. By the third year Annual Report, Permittees not located within a Phase I MS4 permit boundary area shall have available an inventory of the projects subject to this Section.

**F.5.g.1. Site Design Measures**

(i) **Task Description** – The Permittee shall implement site design measures for all projects that create and/or replace (no net increase in impervious footprint) 2,500 square feet or more of impervious surface, including detached single family homes that are not part of a larger plan of development.

(ii) **Implementation Level** - Within the first year of the effective of the permit, the Permittee shall implement the following site design measures for all projects that create and/or replace 2,500 square feet or more of impervious surface, including detached single family homes that are not part of a larger plan of development. The Permittee may implement one or a combination of the following site design measures to reduce project site runoff to the maximum extent technically feasible:

(a) Stream Setbacks and Buffers

(b) Soil Quality Improvement and Maintenance

(c) Tree planting and preservation

(d) Rooftop and Impervious Area Disconnection

(e) Porous Pavement

(f) Downspout Disconnection

(g) Green Roofs

(h) Vegetated Swales

(i) Rain Barrels and Cisterns

**F.5.g.2. Low Impact Development Runoff Standards**

(i) **Task Description** – The Permittee shall implement low impact development standards to effectively reduce runoff from projects that create and/or replace 5,000 square feet or more of impervious surface.

(ii) **Implementation Level** - The Permittee shall adopt and implement requirements and standards to ensure design and construction of development projects achieve LID objectives for runoff reduction, storm water treatment, and baseline hydromodification management. The Permittee shall require projects to provide a map or diagram dividing the entire project site into discrete Drainage Management Areas (DMAs), and to

 account for the drainage from each DMA. The Permittees shall (1) implement source controls and site design measures to the extent technically feasible to reduce the amount of runoff and (2) any remaining runoff from impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or biotreat runoff.

(1) **Source Control Requirements** – The following standard permanent and/or operational source control BMPs shall be adopted and implemented to address the following pollutant sources, as applicable:

(a) Accidental and illicit discharges to on-site storm drain inlets. (b) Interior floor drains and elevator shaft sump pumps

(c) Interior parking garages

(d) Indoor and structural pest control

(e) Landscape/outdoor pesticide use

(f) Pools, spas, ponds, decorative fountains, and other water features

(g) Restaurants, grocery stores, and other food service operations

(h) Refuse areas

(i) Industrial processes

(j) Outdoor storage of equipment or materials

(k) Vehicle and equipment cleaning

(l) Vehicle and equipment repair and maintenance

(m) Fuel dispensing areas

(n) Loading docks

(o) Fire sprinkler test water

(p) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources

(2) **Site Design Measures** *-* The following site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and treatment is required. The methods are based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event.

(a) Stream Setbacks and Buffers

(b) Soil Quality Improvement and Maintenance

(c) Tree planting and preservation

(d) Rooftop and Impervious Area Disconnection

(e) Porous Pavement

(f) Downspout Disconnection

(g) Green Roofs

(h) Vegetated Swales

(i) Rain Barrels and Cisterns

(3) **Storm Water Treatment Measures and Baseline Hydromodification Management Measures -** Runoff from remaining impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or biotreat the amount of runoff specified in below.

 The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.



Minimum surface reservoir volume equal to surface area times a depth of 6 inches.



Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.



Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.



Underdrain with discharge elevation at top of gravel layer.

No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.



No liners or other barriers interfering with infiltration.

Appropriate plant palette for the specified soil mix and maximum available water use.

a) **Alternative Designs —** Facilities of a different design than in (2) may be permitted if the following measures of equivalent effectiveness are demonstrated:

1. Equal or greater amount of runoff infiltrated or evapotranspired

2. Equal or lower pollutant concentrations in runoff that is discharged after biotreatment

3. Equal or greater protection against shock loadings and spills

4. Equal or greater accessibility and ease of inspection and maintenance

b) **Allowed Variations for Special Site Conditions** *-* The bioretention criteria in (2) may be adjusted for special site conditions as follows:

1. Facilities located within 10 feet of structures may incorporate an impermeable cutoff wall between the facility and the structure.

2. Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may

 incorporate an impermeable liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).

3. Facilities located in areas of high groundwater, or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

c) **Exceptions to Requirements for LID Facilities** *-* Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, tree-box-type biofilters or in-vault media filters may be used for the following:

1. Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district, and having at least 85% of the entire project site covered by permanent structures;

2. Facilities receiving runoff solely from existing (pre-project)

impervious areas,

3. Smart growth credits

Tree-box-type biofilters and in-vault media filters shall meet the requirements of the above requirements. Within the second year of the effective date of the permit, each permittee shall adopt or reference appropriate performance criteria for tree-box-type biofilters and in-vault media filters.

Reopener for LID requirements - The Executive Director of the State Water Board may evaluate newly available technical data and other information regarding the effectiveness of source control, runoff reduction, stormwater treatment, and baseline hydrograph modification management measures and may propose to the State Water Board revisions to these criteria as needed to ensure the measures and facilities installed under this Permit minimize pollutant loadings and hydromodification impacts.

d) **Numeric Sizing Criteria for Storm Water Retention and**

**Treatment**

The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

(1) Volumetric Criteria

 a. The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No.

87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or

b. The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the California Stormwater Quality Association’s Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

(2) Flow-based Criteria

a. The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

b. The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

(iii) **Reporting** – For each project approved, the following information shall be completed and be available annually in the Annual Report:

(a) Project Name, Number, Location (cross streets), and Street Address; (b) Name of Developer, Phase No. (if project is being constructed in

phases, each phase shall have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;

(c) Project watershed(s);

(d) Total project site area and total area of land disturbed;

(e) Total new impervious surface area and/or total replaced impervious surface area;

(f) If a redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;

(g) Status of project (e.g., application date, application deemed complete date, project approval date);

(h) Source control measures; (i) Site design measures;

(j) All post-construction storm water treatment systems installed onsite, at a joint storm water treatment facility, and/or at an offsite location;

(k) O&M responsibility mechanism for the life of the project. (l) Water quality treatment calculations used;

(m) Off-site compliance measures (if applicable)

(n) Additional (watershed-specific) hydromodification standards used

**F.5.g.3. Hydromodification Management**

(i) **Task Description** – The Permittee shall develop and implement Hydromodification Management procedures. Hydromodification management projects are projects that create and/or replace one acre or more of impervious surface. A project that does not increase impervious surface area over the pre- project condition is not a hydromodification management project.

(ii) **Implementation Level** - Within the third year of the effective date of the permit, the Permittee shall implement the following Hydromodification Standard:

(a) Post-project runoff shall not exceed estimated pre-project flow rate for the 2-year, 24-hour storm in the following geomorphic provinces (Figure 1):

Coast Ranges Klamath Mountains Cascade Range Modoc Plateau Basin and Range Sierra Nevada Great Valley



(b) Post-project runoff shall not exceed estimated pre-project flow rate for the 5-year, 24-hour storm in the following geomorphic provinces (Figure 1):

Transverse Ranges Peninsular Ranges Mojave Desert Colorado Desert



**Figure 1. California Geomorphic Provinces**

(iii) **Reporting –** By the third year annual report, complete and have available verification that the Hydromodification Management procedures are being implemented.

**F.5.g.4. Operation and Maintenance (O&M) of Post-Construction Storm Water**

**Management Measures**

(i) **Task Description** –Within the second year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for new development projects regulated under this Order

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

 (a) Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

(1) The project proponent’s signed statement accepting responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;

(2) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;

(3) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

(b) Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls.

(c) A database or equivalent tabular format of all projects that have installed treatment systems. This database or equivalent tabular format shall include the following information for each project:

(1) Name and address of the project;

(2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);

(3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;

(4) Description of the type and size of the treatment system(s)

and hydromodification control(s) (if any) installed;

(5) Responsible operator(s) of each treatment system and hydromodification control (if any);

(6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and

(7) Any problems and corrective or enforcement actions taken.

(f) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate State and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities

 for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting -**

(a) For each project inspected during the reporting period (fiscal year) the following information shall be complete and made available in tabular form as part of each year’s Annual Report:

(1) Name of facility/site inspected.

(2) Location (street address) of facility/site inspected.

(3) Name of responsible operator for installed storm water treatment systems and hydromodification management controls.

(4) Inspection details including: Date of inspection, type of inspection (e.g., initial, annual, follow-up, spot), type(s) of storm water treatment systems inspected (e.g., swale, bioretention unit, tree well, etc.) and an indication of whether the treatment system is an onsite, joint, or offsite system.

(5) Type of hydromodification management controls inspected.

(6) Inspection findings or results (e.g., proper installation, proper O&M, system not operating properly because of plugging, bypass of storm water because of improper

installation, maintenance required immediately, etc.). (7) Enforcement action(s) taken, if any (e.g., verbal

warning, notice of violation, administrative citation, administrative order).

(b) On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) Each Permittee shall complete and have available the following information in the Annual Report:

(1) A discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or hydromodification management controls. This discussion shall include a general comparison to the inspection findings from the previous year.

 (2) A discussion of the effectiveness of the Permittee’s O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program).

**F.5.h. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT F.5.h.1. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT**

**PLAN**

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks short and long-term progress of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness, achieve the MEP standard, and protect water quality, and to document the Permittee’s compliance with permit conditions. The Program

Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of each BMP and program implementation as a whole. The effectiveness assessments will build upon each other from one year to the next and shall identify modifications to the program the Permittee must undertake to improve effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following minimum elements:

(1) Implementation of storm water program elements

(2) Identification and targeting of Target Audience(s)

**F.5.h.2 Storm Water Program Modifications**

(i) **Task Description** – Based on the information gained from the effectiveness assessment, the Permittee shall make modifications to control measures/significant activities, including new BMPs or modification to existing BMPs, as specified below. The Permittee shall consult with the Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications.

 (ii) **Implementation Level** –Within the fifth year of the effective date of the permit, the Permittee shall identify program modifications to include:

(a) Improving upon BMPs that did not accomplish goals;

(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;

(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and

(d) Shifting priorities to make more effective use of resources

Documentation similar to Comprehensive Site Evaluation, schedule and document annually.

(iii) **Reporting** – By the fourth year Annual Report complete and have available a summary of maintenance activities of highest priority BMPs. By the fifth year Annual Report, complete and have available a summary of completion of maintenance of high priority BMPs. Complete and have available annually any modifications to the storm water program to improve program effectiveness, to achieve the MEP standard, protect water quality.

**F.5.I TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS**

The Permittee shall comply with all applicable TMDLs approved pursuant to 40 CFR

§ 130.7 for which the Permittee has been assigned a Waste Load Allocation or that has been identified in Attachment G.

Waste Load Allocations (WLA), Load Allocations (LA), effluent limitations, implementation requirements, and monitoring requirements are specified in the adopted and approved Regional Water Board Basin Plans and authorizing resolutions which are incorporated herein by reference as enforceable parts of this General Permit. Applicable Basin Plan amendments and resolutions are identified in Attachment G. Attachment G additionally contains a list of TMDL-specific permit requirements developed by the Regional Boards for compliance with the implementation requirements of the relevant TMDLs. These requirements are an enforceable component of this Order. In some cases, dates are given that fall outside the term of this General Permit. Compliance dates that have already passed are enforceable on the effective date of this General Permit. Compliance dates that exceed the term of this General Permit are included for reference, and become enforceable in the event that this General Permit is administratively extended.

The Regional Water Boards are directed to review, within six months of the effective date of this Order, the TMDL-specific permit requirements contained in Attachment G and to propose to the State Water Board any appropriate revisions after consultation with the Permittees and State Water Board staff. Any proposed

revisions by the Regional Water Boards shall be supported by an explanation of how the proposed TMDL-specific permit requirements are consistent with the assumptions and requirements of applicable WLAs and with the goals of the TMDL. The State Water Board will incorporate any necessary revisions through a reopener. The State Water Board may additionally revise this General Permit through a

 reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this General Permit that assign a WLA to the Permittee or that identify the Permittee as a responsible party. In revising Attachment G, the State Water Board will allow adequate notice and public review.

The Permittee shall complete and have available a report that includes the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the General Permit with each Annual Report. The TMDL implementation report shall include the following information:

1. A description of BMPs implemented, including types, number, and locations

2. An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs’ specified timeframes

3. All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs’ specified timeframes

4. Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs/ specified timeframes

The Permittee shall comply with implementation requirements specified in Category

4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314

Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region’s Integrated Reporting and Listing Decisions and associated Category 4b demonstrations.

NO TMDL’s established for Copeland or Hinebaugh Creeks and not likely in the near future.

**F.5.J ONLINE ANNUAL REPORTING PROGRAM**

**~~F.5.j.1.~~** ~~Department of Defense and Department of Corrections and Rehabilitation Permittees are exempt from Annual Reporting of any provision that could pose a security risk and compromise facility security. Any requested information to determine compliance with this Order [40 CFR 122.41(h)] by the Water Boards or U.S. EPA shall be furnished during normal business hours.~~

**F.5.j.2.** The Permittee shall certify State Water Board’s SMARTS to certify in each online Annual Report they are in compliance with all requirements of the General Permit. If a Permittee is unable to certify compliance with a requirement, it must submit in the online 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.

When is annual report due?

**F.5.j.3**.Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the Regional Water Board’s Executive Officer.

**F.5.j.4**. Permittees involved in regional programs shall coordinate with the members to identify reporting responsibility. SMARTS will accept only one report on behalf of Permittees involved in a regional program. The one report submitted on behalf of Permittees involved in a regional program must include full reporting and demonstration of compliance for each of the Permittees in the regional program.

**G. REGIONAL WATER BOARD AUTHORITIES**

Regional Water Boards are responsible for overseeing compliance with this General Permit. Oversight may include, but is not limited to, reviewing reports, requiring modification to storm water program components and various submissions, imposing region-specific monitoring requirements, conducting inspections and program evaluations (audits), taking enforcement actions against violators of this General Permit, and making additional designations of a Permittee per the criteria described in this General Permit and Fact Sheet. Permittees shall modify and implement their storm water management programs and monitoring as required by the Regional Water Board Executive Officer. The Regional Water Boards may also issue individual permits to Regulated Small MS4s, and

alternative general permits to categories of Regulated Small MS4s. Upon issuance of such permits by a Regional Water Board, this General Permit shall no longer regulate the affected Small MS4(s).

**H. PERMIT RE-OPENER**

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Board may additionally reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

1. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.

2. New or revised Water Quality Objectives come into effect, or any TMDL is adopted or revised that is applicable to the Permittees

3. TMDL-specific permit requirements for adopted TMDLs are developed or revised by a Regional Water Board for incorporation into this Order.

**I. PERMIT EXPIRATION**

This Order expires on (five year expiration date). If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations section 122.6 and remain in full force and effect. If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain authorization as required by the new permit once it is issued.