BMP Plan for Non-Storm Water Discharges in the County of Sonoma

The following plan describes the conditions under which storm water best management practices (BMPs) will be used within the jurisdiction of the County of Sonoma to allow non-storm water discharges into the County municipal separate storm sewer system (MS4) as regulated by the state NPDES Permit Order No. R1-2009-0050. This BMP plan is a requirement of that MS4 permit under Part A Discharge Prohibitions and is outlined in Table 1 of that permit (pg. 11).

In lieu of a strict prohibition against non-storm water discharges into the county MS4 we submit the following BMP plan to the Executive Officer of the North Coast Region Water Quality Control Board for approval. The plan shows conditions under which discharge is allowed and the BMPs used to reduce the impact to water quality for 17 types of discharges. The discharge of flows from emergency fire fighting activity (#5 below) does not need authorization from the Executive Office but is included in the plan to have a comprehensive document on BMPs.

1. Stream diversions permitted by the State or Regional Water Board where such flows are intentionally diverted into the storm drain system.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Provided that all necessary permits, or authorizations, are received and all permit conditions are in place prior to diverting the flow.

Best Management Practices (BMPs) to be implemented:

a) Erosion, sediment, and velocity controls to keep the diverted flows from discharging sediment to the storm drain system.

b) Storm drain shall be clean prior to diversion to prevent discharge of sediment from the storm drain into local waterways.

2. Natural springs and rising ground water that are intentionally diverted into the storm drain system.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Ground water dewatering (from construction or pumped sources) may require a separate NPDES permit.

- Permanent diversions that exist prior to the approval of this BMP Plan and are required to protect public infrastructure and public safety shall be exempt, unless they pose a threat to water quality in which case the County reserves the right to require BMPs to protect water quality.

- No sources of contamination, as mapped on the State Regional Water Quality Control Board's Geotracker website (http://geotracker.swrcb.ca.gov), within one half mile of the diversion site.

Best Management Practices (BMPs) to be implemented:

a) Segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible, or directly to storm drain system, so as to avoid flowing across paved surfaces or gutters where pollutants are present.

b) Control flow rate of discharge to minimize erosion potential.

c) Sediment, if present, shall be removed from discharge through settling or filtration prior to release.

d) BMPs, such as sand bags, shall be utilized to prevent erosion and sediment transport.

e) All sediment removed from discharge shall be collected and disposed of in a timely, legal and appropriate manner.

3. Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)] [1] into structures where flows are diverted into the storm drain system. ("Utility vault dewatering requires a separate NPDES permit", #9 below)[2]

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

- Construction dewatering is not covered by this BMP plan. Separate permit coverage from the North Coast Region Water Quality Control Board is required.

1 "(20) Infiltration. Water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow."

2 NPDES permit for ground water dewatering is required within the North Coast Region including Sonoma County.

- Applies to low volume dewatering of County owned infrastructure only for routine maintenance and/or inspection purposes.

- Evaluate vault water using the attached decision tree entitled "Vault Dewatering Decision Process Flow Chart", or equivalent, to determine whether discharge to the storm drain is allowed.

Best Management Practices (BMPs) to be implemented:

a) No sources of contamination, as mapped on the State Regional Water Quality Control Board's Geotracker website (http://geotracker.swrcb.ca.gov), within one half mile of the diversion site.

b) Sediment and debris, if present, shall be removed from the discharge through settling or a filtration process prior to release.

c) All sediment and debris removed from discharge shall be collected and disposed of in a timely, legal, and appropriate manner.

4. Overflows from riparian habitats or wetlands where such flows are intentionally diverted into the storm drain system.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

- Provided that all necessary permits or authorizations are received prior to diverting the flow.

- Dewatering that would impact beneficial uses of wetlands and other state waters shall be prohibited unless approved by the Regional Water Board.

Best Management Practices (BMPs) to be implemented:

a) Segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible, or directly to storm drain system, so as to avoid flowing across paved surfaces or gutters where pollutants are present.

b) Control flow rate of discharge to minimize erosion potential.

c) Sediment, if present, shall be removed from discharge through settling or filtration prior to release.

d) BMPs, such as sand bags, fiber wattle, and gravel bags shall be utilized to prevent erosion and sediment transport.

e) All sediment removed from discharge shall be collected and disposed of in a timely, legal and appropriate manner.

5. Flows from emergency fire fighting activity. [Note: this type of discharge does not require approval from the Executive Officer according to the MS4 permit.]

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

Best Management Practices (BMPs) to be implemented:

a) If time and resources allow plug the storm drain collection system for temporary storage and proper disposal of runoff.

b) If time and resources allow dam, dike, or berm runoff from fires at industrial facilities or where hazardous materials are involved in the firefighting activities. Request Hazardous Materials Response Teams if necessary for mitigation, monitoring, damming, diking, and testing equipment.

c) Report any hazardous materials entering the storm drain system by getting a CalEMA # (OES#) 800-852-7550. Proper agencies will be notified.

d) When putting equipment back into service do not drain any foam in an area that may enter the storm drain. Direct foam to landscaped areas, gravel, or green areas whenever possible. Do not cause damage or erosion.

e) Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

f) Establish a regular training schedule, train all new employees, and conduct annual refresher training.

g) Use a training log or similar method to document training.

h) Sediment and debris, if present, shall be removed from discharge through settling or filtration prior to release whenever possible. All sediment and debris removed from discharge will be disposed of in a timely, legal, and appropriate manner.

6. Flows from fire fighting training and equipment repair activities.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

Best Management Practices (BMPs) to be implemented- Fire Fighting Training:

a) Whenever possible practice drills are to be performed in areas where runoff will be contained or directed to the sanitary sewer.

b) When practice drills must be performed in an area where runoff could potentially leave the site that site shall be surveyed by the officer-in-charge prior to training activities to ensure that debris will not enter the storm drain system as a result of the drill.

c) As determined feasible runoff from training drills or other non-emergency activities will be directed to landscaped areas, gravel, or green areas whenever possible. Do not cause damage or erosion.

d) Areas that have debris that could potentially enter the storm drain system as a result of the drill activities will not be used for training until the debris has been removed.

e) Runoff from fire training activities will be dechlorinated by containment, aeration, volatilization, or with dechlorination tablets used by trained personnel before discharge to the storm drain system.

f) Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

g) Establish a regular training schedule, train all new employees, and conduct annual refresher training.

h) Use a training log or similar method to document training.

Best Management Practices (BMPs) to be implemented- Fire Systems:

a) Contain flows onsite and/or direct the water flows to landscaped or green areas whenever possible and safe to do so without causing damage or erosion.

b) Divert sprinkler system flows to the sewer, when practicable and with the permission of the local sewer agency.

c) Runoff from fire system testing and maintenance activities will be dechlorinated by containment, aeration, volatilization, or with dechlorination tablets used by trained personnel before discharge to the storm drain system.

d) Discharge from dry chemical suppression systems must be disposed of properly.

Best Management Practices (BMPs) to be implemented- Vehicle and Equipment:

a) Wash vehicles at a specifically designated wash area that drains to the sanitary sewer or take vehicles to a commercial, city or county wash rack.

b) If a wash rack connected to a sanitary sewer system is not available runoff from vehicle and equipment washing activities shall be directed onto landscaped, gravel, or green areas whenever possible. Do not cause damage or erosion.

c) Perform maintenance or repair work inside. Only emergency repairs and maintenance activities that do not involve fluids may be performed outdoors.

d) Do not store leaking vehicles or equipment outdoors. Contain leak (drip pans), repair immediately, or move indoors and repair.

e) Good housekeeping and dry cleanup practices will be utilized as part of standard facility maintenance procedures.

Best Management Practices (BMPs) to be implemented- Live Fire Training:

a) Live fire training activities will be pre-planned to allow integration of structural BMP barriers to control runoff as deemed necessary.

b) Runoff from live fire training activities will be dechlorinated by containment, aeration, volatilization, or with dechlorination tablets used by trained personnel before discharge to the storm drain system.

c) Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.

d) Establish a regular training schedule, train all new employees, and conduct annual refresher training.

e) Use a training log or similar method to document training.

f) Sediment and debris, if present, shall be removed from discharge through settling or filtration prior to release. All sediment shall be disposed in a timely, legal, and appropriate manner.

7. Fire hydrant testing, service and repair.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

Best Management Practices (BMPs) to be implemented:

a) Water must be dechlorinated using aeration and/or other appropriate means including infiltration into the ground. Chlorine residual in discharge shall not exceed 0.02-mg/L.

b) Utilize BMPs to increase the distance and removal of chlorine by volatilization before discharge to a storm drain.

c) Segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible so as to avoid flowing across paved surfaces or gutters where pollutants are present.

d) Control flow rate of discharge to minimize erosion potential.

e) Water deterring devices such as hoses and sand bags, fiber wattle, and gravel bags shall be utilized to prevent erosion and sediment transport.

8. Discharges from potable water sources.[3]

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Applies to water line and water lateral flushing.
- Water main breaks and fire hydrant knockdowns are considered "spills" and require notification to CalEMA due to the high quantity of flow.

Best Management Practices (BMPs) to be implemented:

a) Must be dechlorinated and reoxygenated using aeration and/or other appropriate means including infiltration into the ground.

b) Sediment and solids removed from discharge through settling or filtration.

3 The term applies to low volume, infrequent, and/or incidental releases that are innocuous from a water quality perspective and may include breaks from water lines. Releases may occur for discharges from potable water sources only with the implementation of appropriate BMPs and dechlorination prior to discharge. Discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity (#9 above).

c) Segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible so as to avoid flowing across paved surfaces or gutters where pollutants are present.

d) Control flow rate of discharge to minimize erosion potential.

e) BMPs such as sand bags, fiber wattles, or gravel bags shall be utilized to prevent erosion and sediment transport.

f) All sediment removed from discharge shall be collected and disposed of in a timely, legal and appropriate manner including street sweeping after evaporation.

9. Utility vault dewatering.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Evaluate vault water dewatering using the attached decision tree, or equivalent, to determine whether discharge to the storm drain is allowed.
- All private utility vault dewatering requires separate coverage under Order No. 2006-0008-DWQ, or as updated from the Low Threat Discharge requirements.
- Municipally owned utility vault dewatering is allowed if the following BMPs are implemented:

Best Management Practices (BMPs) to be implemented:

a) Sediment and solids are removed from discharge through settling or filtration.

b) Segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible so as to avoid flowing across paved surfaces or gutters where pollutants are present.

c) Control flow rate of discharge to minimize erosion potential.

d) BMPs such as sand bags, fiber wattle, and gravel bags shall be utilized to prevent erosion and sediment transport.

e) All sediment removed from discharge shall be collected and disposed of in a timely, legal and appropriate manner.

10. Gravity flow from foundation, footing, and crawl space drains.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Discharges that exist prior to the approval of this BMP plan shall be exempt unless they pose a measurable threat to water quality in which case the County reserves the right to require storm water BMPs to protect water quality.

Best Management Practices (BMPs) to be implemented:

a) Sediment and solids removed from discharge through settling or filtration.

b) If possible, segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible so as to avoid flowing across paved surfaces or gutters where pollutants are present.

c) BMPs such as sand bags, fiber wattle, and gravel bags shall be utilized to prevent erosion and sediment transport.

d) All sediment removed from discharge shall be collected and disposed of in a timely, legal and appropriate manner.

e) No sources of contamination, as mapped on the State Regional Water Quality Control Board's Geotracker website (http://geotracker.swrcb.ca.gov), within one hundred feet of the diversion site.

11. Air conditioning condensate.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Discharges that exist prior to the approval of this BMP plan shall be exempt unless they pose a measurable threat to water quality in which case the County reserves the right to require storm water BMPs to protect water quality.

Best Management Practices (BMPs) to be implemented:

a) Segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible so as to avoid flowing across paved surfaces or gutters where pollutants are present.

b) Control flow rate of discharge to minimize erosion potential if directed to landscape areas.

c) BMPs such as sand bags, fiber wattle, and gravel bags may be utilized to prevent erosion and sediment transport.

d) All sediment removed from discharge shall be collected and disposed of in a timely, legal, and appropriate manner.

12. Water from crawl space pumps.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Discharges that exist prior to the approval of this BMP plan shall be exempt unless they pose a measurable threat to water quality in which case the County reserves the right to require storm water BMPs to protect water quality.

Best Management Practices (BMPs) to be implemented:

a) Sediment and solids removed from discharge through settling or filtration.

b) If possible, segregate flow to prevent introduction of pollutants. Flow should be discharged to landscape areas if possible so as to avoid flowing across paved surfaces or gutters where pollutants are present.

c) BMPs such as sand bags, fiber wattle, and gravel bags shall be utilized to prevent erosion and sediment transport.

d) All sediment removed from discharge shall be collected and disposed of in a timely, legal and appropriate manner.

e) No sources of contamination, as mapped on the State Regional Water Quality Control Board's Geotracker website (http://geotracker.swrcb.ca.gov), within one hundred feet of the diversion site.

13. Reclaimed and potable landscape irrigation runoff applicable to surface over-spray only.

The County does not use or sell recycled water. However, recycled water is used in the MS4 permit boundary. In the event there is a discharge of recycled water to the County's MS4, the County will refer the discharge to the recycled water purveyor for follow up.

14. Dechlorinated/ debrominated swimming pool discharges.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

Best Management Practices (BMPs) to be implemented:

a) Discharge to landscape first then the sanitary sewer. Notify the operator of the waste water treatment plant if draining an Olympic sized 660,000-gallon pool.

b) Swimming pool discharges must be dechlorinated and aerated to remove chlorine if necessary with a controlled release to prevent re-suspension of sediments or erosion.

c) Cleaning waste water and filter back wash shall not be discharged to the storm drain system. Water that has been hyperchlorinated shall not be discharged to the storm drain system, even after de-chlorination. No discharges are allowed containing salts in excess of Water Quality Standards.

d) Chlorine residual in discharge shall not exceed 0.02mg/L.

15. Non-commercial car washing by residents or non-profit organizations.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharge to the sanitary sewer, and are not possible.

Best Management Practices (BMPs) to be implemented:

a) Preferred area is at commercial carwash or in an area where wash water infiltrates such as vegetated areas.

b) Pumps, vacuums, or physical routing BMPs may be used to direct water to areas for infiltration or re-use.

c) Provide educational and outreach materials as needed. Try to obtain “kits” to assist non-profits with blocking off the storm drain and pumps to divert water to the sanitary sewer or landscaped areas.

16. Pooled storm water from treatment BMPs[4], such as bioretention ponds, that are intentionally discharged to the storm drain system as part of maintenance activities.

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- Discharge is not a source of pollutants.
- Any sediment shall be disposed of properly in compliance with local, state, and federal regulations; not resuspended, and not allowed to enter the storm drain.

Best Management Practices (BMPs) to be implemented:

a) Discharge shall cease before sediments are resuspended. Use siphons, surface skimmers, or other techniques to remove surface waters first.

17. Water tank maintenance

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.

Best Management Practices (BMPs) to be implemented:

a) Erosion, sediment, and velocity controls will be in place to keep the diverted flows from discharging sediment to the storm drain system.

b) Preferred release area is where water infiltrates into vegetated areas.

c) Declorination of flushed water will be done regardless of location. Dechlorination equipment, depending on the application, can include some of the following: 1) LPD-Chlor tablets, 2) Vita-D-Chlor™ (ascorbic acid – vitamin C chemistry), or 3) Hach pocket colorimeter to measure residual chlorine concentrations.

d) Water that has been hyperchlorinated shall not be discharged to the storm drain system even after dechlorination.

[4] All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer and designed to drain within 72-hrs of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

e) Inspect and clear all storm drains and drainage channels for possible blockages.

f) Inspect for possible erosion and sediment issues.

g) Inspect possible sources of contamination, i.e. oil cans, garbage, etc., in storm drains and drainage channels.

h) Prior to each discharge from a County water tank a plan must be developed to evaluate the impacts and minimize those impacts to the highest degree possible. This dewatering plan must include: reason for the discharge, location of the tank, a site map, anticipated volume of discharge, and prepare answers the public would likely pose.

i) Any remaining water must be dechlorinated and removed from the water tank.

j) Once the chlorine is below non-detectable levels slowing begin discharge. Inspect effluent flow and adjust accordingly by occasionally resampling effluent to ensure the absence of chlorine.

k) Use straw bales to aid with reducing flow, erosion, and sediment discharge.

18. Power washing and surface cleaning of sidewalks and plazas

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer or landscaped areas, and are not possible.
- No soap or cleaning agents are used.
- Only small amounts of oil are present on the area being cleaned.

Best Management Practices (BMPs) to be implemented:

a) Sweep, collect, and dispose of debris.

b) Clean all oil spots, if present, with water free methods prior to power washing.

c) Dispose into trash all absorbent material used.

d) Place and oil-adsorbent boom around the storm drain inlet during power washing if oil spots are present.

e) Protect the storm drain inlet with filter material to remove pollutants.

19. Power washing and surface cleaning of building exteriors and walls

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer or landscaped areas, and are not possible.
- No soap or cleaning agents are used.
- The building is unpainted glass or steel construction.
- The building is known to have lead free paint.

Best Management Practices (BMPs) to be implemented:

a) Sweep, collect, and dispose of debris.

b) Protect the storm drain inlet with filter material to remove pollutants and paint chips.

20. Power washing and cleaning of grocery carts

Conditions under which allowed:

- All feasible alternatives to discharge of non-storm water flow have been considered, including discharging to the sanitary sewer, and are not possible.
- No soap or cleaning agents are used.
- No oil or grease will be discharged.

Best Management Practices (BMPs) to be implemented:

a) Sweep, collect, and dispose of debris.

b) Protect the storm drain inlet with filter material to remove pollutants and paint chips.

This non-storm water discharge best management practice (BMP) plan is intended to be consistent with the Basin Plan Amendment by the state North Coast Region Water Quality Control Board. Any revisions to the Basin Plan Amendment prior to adoption will result in the subsequent revision of this BMP Plan. Any non-storm water discharge not specifically listed in this non-storm water BMP plan will be governed by the state Basin Plan and the Basin Plan Amendment.

You can contact Reg Cullen, County of Sonoma, PRMD at 707/838-3341 with questions about this plan.