Changes to the General Construction Permit: New Requirements

Terri Fashing, MCSTOPPP
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(Adapted from Scott Taylor, RBF Consulting)

Order Section VII - Training

- SWPPP – QSD
  - PE, PG or EG, LA, PH, CPESC, or CPSWQ
    and take approved course by 9-2-11
- REAP/Implementation – QSP
  - Certified inspector (CISEC or CESSWI) or
  - QSD
  - And take approved course by 9-2-11
Cost to Implement

- Depends on the risk level.
  - Sediment risk and receiving water risk (Tom, LAG, WLK)
  - Complete construction and stabilize site during summer
  - Sites 1-5 acres – Rainfall Erosivity Waiver?
- The 680 Trail project
  - Risk Level 1 unless...
  - QSD SWPPP preparation and data submission: $9400
    - Range $3k - $20k depends on complexity
  - SWPPP implementation: $71k

<table>
<thead>
<tr>
<th>QSP SWPPP Implementation</th>
<th>Project Initiation</th>
<th>$290</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Review SWPPP</td>
<td>$3680</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>$1840</td>
</tr>
<tr>
<td></td>
<td>Weekly Inspections</td>
<td>$19,400</td>
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<tr>
<td></td>
<td>Final Inspection</td>
<td>$2520</td>
</tr>
<tr>
<td></td>
<td>REAPs &amp; monitoring</td>
<td>$30,000</td>
</tr>
<tr>
<td></td>
<td>RL 2 Reporting &amp; Corrective</td>
<td>$9700</td>
</tr>
</tbody>
</table>
Overview

- Permit
  - Findings
  - Order
- Monitoring and Reporting
- Rain Event Action Plans
- Sample Risk Calculation - Project
- Resource Impacts Analysis

Overview

- Clean Water Act → NPDES
- State Water Resources Control Board
  - Statewide Phase II NPDES Municipal Stormwater Permit
  - Statewide Construction General Permit
    - 5 Acres
    - 1 Acre
    - Reissued permit effective July 1, 2010
Overview

- All phases of construction
- Repaving exempt - unless underlying soil is disturbed or surrounding soil cleared
- LUP’s: Linear Underground/Overhead Projects – no monitoring

Permit Findings

- Prohibited: Discharge of any debris
- Numeric Action Limit:
  - Turbidity 250 NTU, pH 6.5 – 8.5
- Numeric Effluent Limit
  - Turbidity 500 NTU, pH 6-9
- Design Storm: 5 year, 24 hr for NEL compliance (RL 3)
- Exceedance of NEL is a violation of the permit!
What Will an Exceedance Mean?

- FINES!

Order – Section II Conditions

- Permit Registration Documents (PRDs)
  - Notice of Intent
  - Risk Assessment
  - Site Map
  - SWPPP
  - Signed Certification Statement
- 7 Days prior to construction
- Send fee separately
- Site not covered until you receive WDID #
- Legally Responsible Person or Approved Signatory
Order, Con’t

- Small Site Erosivity Waiver (R < 5)
  - 1 to 5 acres disturbed area
  - submit waiver through SMARTS, pay fee

- Final Stabilization
  - Project cannot pose any additional sediment discharge risk than it did prior to starting construction
  - 70% permanent vegetative coverage at end
  - RUSLE or RUSLE2 Method
  - Custom Method (testing & analysis)

Order Section VIII – Risk Determination/Requirements

- Three Risk Categories – based on site and receiving water risk

- Risk computation/determination greatly simplified:
  - Assess Site: Compute R, K and LS for project
  - Assess Receiving Water: 303(d) listed
    - Tomales Bay, Lagunitas & Walker Creeks, Petaluma River
  - COLD, SPAWN and MIGRATORY
    - Pine Gulch, Walker, Lagunitas, Olema, & Nicasio Creeks
  - For Risk 3, must be ‘high’ for site and RW Risk
A = (R)(K)(LS)(C)(P) where:
A = rate of sheet and rill erosion
R = rainfall-runoff erosivity factor
K = soil erodibility factor
LS = length-slope factor
C = cover factor (erosion controls)
P = management operations and support practices (sediment controls)

Risk Categories

<table>
<thead>
<tr>
<th>Receiving Water Risk</th>
<th>Sediment Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>Level 1</td>
</tr>
<tr>
<td>High</td>
<td>Level 2</td>
</tr>
</tbody>
</table>
Order Section VIII – Risk Determination/Requirements

Risk Level 1

- Risk Level 1 Requirements
  - No NELs or NALs
- B. Housekeeping
  - Cover stockpiled materials not ‘actively’ being used
  - Must store chemicals under cover (watertight)
  - Cover waste containers – end of day and before rain
  - Concrete washouts must be water tight
  - BMPs to prevent trackout.

Risk Level 1 – Con’t

- Discontinue application of any erodible landscape material within 2 days before a forecasted rain
- Street washing is effectively prohibited
- Soil cover required for inactive areas (14 days)
- Design sediment basins to CASQA stds.
- Run-on: It appears that you own it:
Run-on (Section F.)

- “Risk Level 1 dischargers shall evaluate the quantity and quality of run-on and runoff through observation and sampling. Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off-site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.”

Risk Level 1 – Con’t

- BMP Inspection and Repair:
- Done by a QSP, each formally documented
- Inspect weekly (checklist), during rain events – before/after inspections also required.
- 72 hrs to effect repairs
- No REAP required
- During business hours only
- Quarterly non-stormwater inspection
Risk Level II

Additional Risk Level II Requirements
- pH NAL 6.5 – 8.5
- Turbidity NAL 250 NTU
- REAPs are required – all phases or inactive
- Provide effective soil cover for inactive areas (14 days) AND ‘appropriate’ erosion control BMPs (soil stabilization) for active areas
- Required sediment controls at top/toe and face of slopes to segment them (assumed ‘finished’ slopes)

Risk II Additional Requirements
Con’t

- Limit traffic to designated entrances/exits
- Inspect all access roads daily for track out
- REAP developed 48 hrs prior to forecast event and on site 24 hrs prior to event
- MUST collect effluent samples
  - Collect 3 samples per day
  - pH and Turbidity
Risk II NAL Exceedences

What is required if NAL exceedance:

- Submit all sampling results to SB w/in 10 days after storm event conclusion
- RB may require a NAL Exceedance Report which describes the problem and corrective actions taken
- Examine BMPs and take action to reduce value to less than NAL – this is a continuous loop for NAL exceedance

Order – Section III

- File NOT within 90 days of completion
- Plan to maintain post-construction BMPs
- Non-stormwater discharge must be monitored for NAL and NEL compliance
Order Section V. Effluent Stds.

Table 1 - Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Method</th>
<th>Discharge Type</th>
<th>Min. Detection Limit</th>
<th>Units</th>
<th>Numeric Action Level</th>
<th>Numeric Effluent Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Field test with calibrated portable instrument</td>
<td>Risk Level 2</td>
<td>0.2</td>
<td>pH units</td>
<td>lower NAL = 6.5, upper NAL = 8.5</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk Level 3</td>
<td></td>
<td></td>
<td></td>
<td>lower NEL = 6.0, upper NEL = 9.0</td>
</tr>
<tr>
<td>Turbidity</td>
<td>EPA 0180.1 and/or field test with portable instrument</td>
<td>Risk Level 2</td>
<td>0</td>
<td>NTU</td>
<td>250 NTU</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk Level 3</td>
<td></td>
<td></td>
<td>250 NTU</td>
<td>500 NTU</td>
</tr>
</tbody>
</table>
Order Section XIII – Post Construction

- Phase II Permit

Monitoring and Reporting
Sampling Requirements

- Current permit requirements continue
- Types: Visual, Non-visible, Effluent and Receiving Water
- Visual – required for all risk levels
- Non-visible – required for all risk levels
- Effluent – Risk 2 and 3 Only
  - Always Required – pH and Turbidity (SSC for RL3 if NEL violation)
- Receiving Water
  - Risk 3 only with NEL Violation and direct discharge

New Monitoring Requirements Overview

<table>
<thead>
<tr>
<th>Risk Level</th>
<th>Visual</th>
<th>Non-visible Pollutant</th>
<th>Effluent</th>
<th>Receiving Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Level 1</td>
<td>three types required: storm water, post-storm, and post-rain</td>
<td>As needed (see below)</td>
<td>not required</td>
<td>not required</td>
</tr>
<tr>
<td>Risk Level 2</td>
<td>pH, Turbidity, and SSC if turbidity NEL exceeded</td>
<td>not required</td>
<td>not required</td>
<td>not required</td>
</tr>
<tr>
<td>Risk Level 3</td>
<td>pH, Turbidity, SSC, and bioaccumulation</td>
<td>not required</td>
<td>not required</td>
<td>not required</td>
</tr>
</tbody>
</table>
Water Quality Sampling - Effluent

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Effluent Monitoring (Section E, below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Level 1</td>
<td>no monitoring required</td>
</tr>
<tr>
<td>Risk Level 2</td>
<td>samples beginning the first hour of any new discharge and samples during the first and last hour of every day of normal operations, characterizing discharges associated with construction activity from the entire project disturbed area. (Minimum of 3 samples per day)</td>
</tr>
<tr>
<td>Risk Level 3</td>
<td>samples beginning the first hour of any new discharge and samples during the first and last hour of every day of normal operations, characterizing discharges associated with construction activity from the entire project disturbed area. (Minimum of 3 samples per day)</td>
</tr>
</tbody>
</table>

Reporting - Annual

- Electronically submit by September 1 each year
- Include:
  - Summary and analysis of all sampling data
  - Summary of all corrective actions
  - Identification of any compliance activities or corrective actions that were not taken
  - A summary of all exceedances and violations of the permit
  - Names of all responsible parties
  - All visual, effluent and receiving water inspection records, including exceptions
  - Personnel training information
Rain Event Action Plan

Rain Event Action Plan (REAP)

- Risk Level 2 and 3 only
- Develop plan 48 hrs prior to a ‘likely’ rain event (50% chance of rain)
- REAP must be on site, and implementation starting 24 hours prior to likely rain event
- Prepared by the QSP
- Reflect construction stage of site – 4 stages
Rain Event Action Plan (REAP)

Grading and Land Development Phase

Preparation of land for safety, accessibility and historic building including clearing and grubbing, demolition, grading or rock grinding, soil stabilization and soil excavation and slope grading. This form is to be completed and submitted by the qualified BMP practitioner within 48 hours prior to a rain event during the Grading and Land Development Phase.

Site Information:

Site Name, City and Zip Code: [ ], [ ], [ ]

Site Storm Water Manager Information:

Name, Company and Emergency Phone Number (24/7): [ ]

Erosion and Sediment Control Provider - Labor Force Contracted for the Site:

Name, Company and Emergency Phone Number (24/7): [ ]

Storm Water Sampling Agent Information:

Name, Company and Emergency Phone Number (24/7): [ ]

Activities Associated with Land Surface Development:

- Vegetation Removal
- Vegetation Salvage-Revetment
- Rock Grading
- Bioturbation
- Dive Excavation
- Soils Testing
- Erosion and Sediment Control
- Surveying
- Material Delivery and Storage
- Other:

Trade Active on Site During Land Surface Development:

- Storm Drain Improvements
- Water, Sewer, Electric Utilities
- Street Improvements
- Drainage Systems
- Equipment/Reefer Maintenance
- Lumber
- Other:

Trade Contractor Information Provided:

- Site Visits
- Planning Meetings
- Training Workshop
- Signage

Rain Event Action Plan (REAP)

Streets and Utilities Phase

Finish grading activities and installation of electrical, gas, water, power, stormwater control, and communication systems; installation of roadways, curbs, gutters and other site design elements; fire suppression systems. This forms to be completed and submitted by the qualified BMP practitioner within 48 hours prior to a rain event during the Streets and Utilities Phase.

Site Information:

Site Name, City and Zip Code: [ ], [ ], [ ]

Site Storm Water Manager Information:

Name, Company and Emergency Phone Number (24/7): [ ]

Erosion and Sediment Control Provider - Labor Force Contracted for the Site:

Name, Company and Emergency Phone Number (24/7): [ ]

Storm Water Sampling Agent Information:

Name, Company and Emergency Phone Number (24/7): [ ]

Activities Associated with Streets and Utilities Development:

- Rock Grading
- Gravel Grading
- Storm Drain Improvements
- Material Delivery
- Trenching
- Concrete Pouring
- Electrical Installation
- Fencing
- Other:

Trade Active on Site During Streets and Utilities Development:

- Storm Drain Improvements
- Grinder
- Sewer Pipe Installation
- Gas Pipe Installation
- Electrical Installation
- Communications Installation
- Erosion and Sediment Control
- Other:

Trade Contractor Information Provided:

- Site Visits
- Planning Meetings
- Training Workshop

Other:
### Rain Event Action Plan (REAP)  
**Vertical Construction Phase**

Build out of properties from foundation to roofing, excluding rough landscaping. This form to be reviewed and completed by the qualified SWPPP practitioner within 48 hours prior to a rain event during the Vertical Construction Phase.

#### Site Information:
- Site Name: [Redacted]  
- City and Zip Code: [Redacted]  
- Risk Level: 2  
- Risk Level: 2

#### Storm Water Manager Information:

#### Erosion and Sediment Control Provider – Labor Force Contracted for the Site:

#### Storm Water Sampling Agent Information:

#### Activities Associated with Vertical Construction:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sub Activity</th>
<th>Sub Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing</td>
<td>Carpenters</td>
<td>Concrete Framing/Tiling</td>
</tr>
<tr>
<td>Masonry</td>
<td>Electrical</td>
<td>Painting</td>
</tr>
<tr>
<td>Dwelling Insitu</td>
<td>Plumbing</td>
<td>Site</td>
</tr>
<tr>
<td>Equip. Maintenance</td>
<td>Sheet Metal</td>
<td>Landscaping &amp; Irrigation</td>
</tr>
<tr>
<td>HVAC</td>
<td>Insulation</td>
<td>Fencing</td>
</tr>
<tr>
<td>HVAC systems</td>
<td>Mechanical</td>
<td>Roofing</td>
</tr>
<tr>
<td>HVAC accessories</td>
<td>Plumbing and Heating</td>
<td>Roofing</td>
</tr>
</tbody>
</table>

#### Traders Active on Site During Vertical Construction:

<table>
<thead>
<tr>
<th>Trades</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Contractor</td>
</tr>
<tr>
<td>Educational</td>
</tr>
<tr>
<td>Contracted Language</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

#### Trade Contractor Information Provided:

<table>
<thead>
<tr>
<th>Services Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Workshop</td>
</tr>
<tr>
<td>Fencing</td>
</tr>
<tr>
<td>Signage</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

### Rain Event Action Plan (REAP)  
**Post – Construction Phase**

Post landscaping and site stabilization, material removal, and post construction obligation installations such as storm drain cleaning. This form to be reviewed and completed by the qualified SWPPP practitioner within 48 hours prior to a rain event during the Post-Construction Phase.

#### Site Information:
- Site Name: [Redacted]  
- City and Zip Code: [Redacted]  
- Risk Level: 2  
- Risk Level: 2

#### Storm Water Manager Information:

#### Erosion and Sediment Control Provider – Labor Force Contracted for the Site:

#### Storm Water Sampling Agent Information:

#### Activities Associated with Site Post Construction:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sub Activity</th>
<th>Sub Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stabilization</td>
<td>Vegetation Establishment</td>
<td>Erosion Control BMP Removal</td>
</tr>
<tr>
<td>Final Grade</td>
<td>Storage Yard (Material Removal)</td>
<td>Landscape Installations</td>
</tr>
<tr>
<td>Planning and Turn-Up</td>
<td>Irrigation System Testing</td>
<td>Other</td>
</tr>
</tbody>
</table>

#### Itineraries Post Construction BMPs:  
- Drainage System  
- Inlet  
- Other

#### Trades Active on During Site Post Construction:

<table>
<thead>
<tr>
<th>Trades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Delivery</td>
</tr>
<tr>
<td>Landscape Installations</td>
</tr>
<tr>
<td>BMP Installations</td>
</tr>
<tr>
<td>Erosion Control BMP Installation</td>
</tr>
<tr>
<td>Site Survey (Electrical)</td>
</tr>
<tr>
<td>Equipment Fixing</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

#### Home Owner and HOA Information Provided:

<table>
<thead>
<tr>
<th>Services Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Material Installation</td>
</tr>
<tr>
<td>Training Workshop</td>
</tr>
<tr>
<td>Fencing</td>
</tr>
<tr>
<td>Signage</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

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**Stage 3**

**Stage 4**
Still Not Rocket Science

Where:

\[ E = \text{Erosion of the Soil} \]
\[ M = \text{Mechanical Disturbance} \]
\[ C = \text{Construction Period} \]