

UPDATE >2014

CCGP **Issue #2** REVIEW

For QSD and QSP Registration and Renewal

Feedback from Implementation

THIS ISSUE: Feedback and Lessons Learned

- Enforcement Case Study
- Lessons from the QSD/QSP Feedback Forum at the 2013 CASQA Conference!
- Protecting Wildlife



Enforcement Case Study

Much can be learned from an enforcement case. When an inspector reviews a site, the first item that is usually reviewed is the documentation on the site. Reviewing the Storm Water Pollution Prevention Plan (SWPPP) tells the inspector what the QSD determined were appropriate Best Management Practices (BMPs) for each phase of construction. Walking the site tells the inspector how well the QSP is following that plan and adjusting to changing conditions. The inspection reports tell the inspector what the QSP has been observing and the steps taken to fix problems. But while torrential rains can overwhelm the best of BMPs, it is honest documentation that tells the inspector that the best effort was put forth to deal with difficult site conditions. Inaccurate documentation is inexcusable.



Figure 1

This case study will highlight the importance of appropriate BMP selection in the SWPPP, proper BMP installation, proper BMP maintenance, and accuracy of compliance documents. This case study is not a comprehensive review of all permit requirements, but it serves to show how the QSD and QSP need to work together toward site compliance.

Inadequate BMP Maintenance

Photos from an inspector show that permit conditions are not met. The first issue was poorly maintained BMPs. The photo in Figure 1, taken on October 22, shows wattles used as perimeter control, but the silt fence is in disrepair and other BMPs are clearly not maintained.

After the inspector left the site, a rain event occurred. Two days later the QSP did an inspection and noted that there were no issues (Figure 2).

Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

Inspection	Inspected?	Maintenance Required?	Corrective Action Needed and Notes
1. Are all slopes and disturbed areas not actively being worked properly stabilized?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
3. Are perimeter controls and sediment barriers adequately installed (towed into substrate) and maintained?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Non-Compliance

Describe any incidents of non-compliance not described above:

NO ~~INCIDENTS~~ INCIDENTS TO REPORT

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print name and title: _____

Signature: _____ Date: 10-24-12

Figure 2

This was not the case. The QSP further signed the certification statement that reported “no incidents to report” concerning non-compliance. Observation of the unmaintained BMPs shows that this inspection report was not accurate.

Inadequate BMP Installation

Another problem was the lack of linear sediment controls, evident in Figure 3. This is clearly a permit violation. Review of the SWPPP shows that wattle installation was scheduled to start on September 10, and yet all wattles on site were not properly spaced or installed (see loose wattles in the background) as of November 28.

Inadequate SWPPP

And even though there was straw scattered lightly about the site, the SWPPP didn’t call for straw. Instead, hydroseeding with a binder was specified, as shown in the excerpt below (Figure 4). So one might also question the adequacy of the SWPPP.

Regardless of the method specified, the QSP should have known that the resulting coverage was inadequate to prevent erosion and noted this in the inspection reports. It would also have been appropriate to question the QSD regarding the selection of hydroseeding alone as a temporary erosion control.



Figure 3

EROSION CONTROL BMPs					
BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
ES-1	Scheduling		✓		
ES-2	Preservation of Existing Vegetation		✓		
ES-3	Hydraulic Mulch			✓	Hydroseeding w/ organic binder used instead
ES-4	Hydroseeding		✓		
ES-5	Soil Binders			✓	Hydroseeding w/ organic binder used instead
ES-6	Straw Mulch			✓	Hydroseeding w/ organic binder used instead
ES-7	Geotextiles & Mats	✓			

Figure 4

Missing Documents

Documentation by the QSP (Figure 5) also showed that rain events should have triggered preparation of a Rain Event Action Plan (REAP) for the November 21 storm event. A REAP was not prepared. This is another violation.

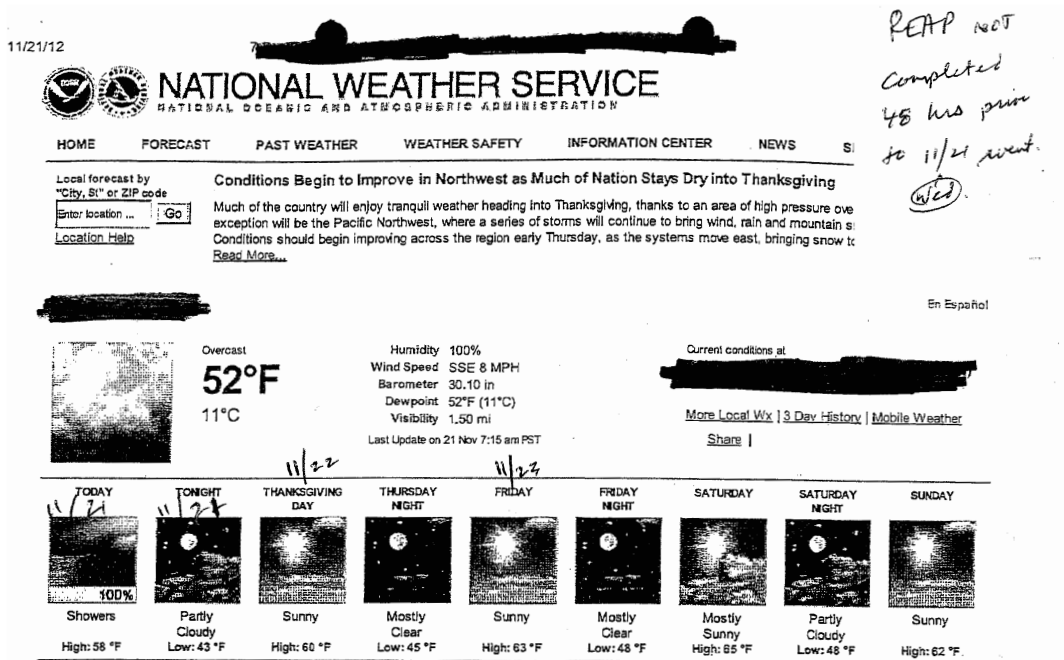


Figure 5

Falsification of Inspection Reports

Then when the inspector followed up on November 28, discharge was observed from the site (Figure 6). Discharge does not necessarily equate to a violation. The violation in this instance was that the QSP claimed that no discharge occurred (Figure 7). This is falsification of compliance documents.



Figure 6

Stormwater Construction Site Inspection Report		
General Information		
Project Name	[REDACTED]	
NPDES Tracking No.	[REDACTED]	Location [REDACTED]
Date of Inspection	11-29-12	Start/End Time 11:00 AM - 11:30 AM
Inspector's Name(s)	[REDACTED]	
Inspector's Title(s)	[REDACTED]	
Inspector's Contact Information	[REDACTED]	
Inspector's Qualifications	[REDACTED]	
Describe present phase of construction	GRADING AND LAND DEVELOPMENT	
Type of Inspection:	<input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input checked="" type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event	
Weather Information		
Has there been a storm event since the last inspection?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If yes, provide:	Storm Start Date & Time: 11-28-12 @ 8:00 AM	Storm Duration (hrs): 2.5 Approximate Amount of Precipitation (in): .70"
Weather at time of this inspection?	<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input checked="" type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: Temperature:	
Have any discharges occurred since the last inspection?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
If yes, describe:		

Figure 7

Remember that the Clean Water Act in Section 309(c)(4) provides that falsification of reports can result in fines up to \$10,000 and imprisonment for up to two years. In another storm on November 30, the inadequate BMPs were easily overwhelmed (Figure 8).



Figure 8

The aftermath

Further documentation of damage to the natural water quality of a creek (Figure 9) contributed to stiff penalties. Finally, an Active Treatment System (ATS) unit was brought in (Figure 10). Last minute implementation to fix big problems was not a very cost-effective solution. The ATS system alone cost over \$100,000, and other BMPs were still required to comply with the provisions in the permit.



Figure 9



Figure 10

Lessons from the QSD/QSP Feedback Forum at the 2013 CASQA Conference

Feedback

What are the most common SWPPP deficiencies?

- SWPPP is too generic, too long, or copied from a previous project.
- SWPPP shows too many BMPs at once, rather than showing how different BMPs are used for different phases of construction.
- Sampling locations are missing.

I controlled concrete, wallboard, and don't use soil amendments that would raise pH, so why are my numbers still high?

- Remember that concrete tile cutting can lead to elevated pH.
- Exposed aggregate that contains recycled concrete can also elevate pH.

LUP requirements do not specify a 0.5" qualifying rain event, so what size event should be tracked to trigger a pre-event inspection?

- All storms must be tracked, and any amount of predicted rain will trigger an inspection. But the photos from only every third event must be uploaded to SMARTS.

When portions of a project close out, how do I document the change in acreage?

- To adjust the Total Disturbed Area in SMARTS, use a Change of Information (COI). The COI is especially helpful for projects that are constructed in phases. Just remember, SMARTS only allows one COI to be submitted at a time

In a rapidly changing construction environment, how can an inspector or QSP best observe the condition of BMPs that may be affected by daily construction activities?

- Scheduling inspections at the end of the working hours for each location gives a better picture of how crews are leaving the site.

Why should I maintain a QSD when I am a registered engineer?

- This is a matter of personal preference. Some engineers prefer not to operate under their license when the work does not require it. Others enjoy the benefits of continuing education via the CGP Reviews and the online public look-up tools.

Recommendations for QSP

- Rain event inspection and reporting requirements are only caused from precipitation on site, though run-on may still occur from precipitation off-site.
- Limit travel paths for heavy equipment during the wet season.
- Self-quantify the amount of discharge to avoid overestimation by the rudimentary methods used by regulators.
- Remind your Legally Responsible Person (LRP) that Regional Water Board inspection reports are publicly available via SMARTS.

Where can I go for the latest information?

http://www.swrcb.ca.gov/water_issues/programs/stormwater/gen_const_faq.shtml

More questions? Contact your local Regional Water Board:
www.waterboards.ca.gov/waterboards_map.shtml

Wildlife-Friendly Erosion and Sediment Control

The Regional Water Boards, CA Fish and Wildlife, and other resource agencies are strictly enforcing the removal of any erosion or sediment control BMPs containing plastic netting because of the potential for wildlife entanglement. This is required by the Regional Water Board before your project can be terminated. If you plan on leaving any BMPs in place at the end of the project they will have to be wildlife friendly. This applies to all areas of the construction project, not just the areas in or near the watercourse. Even temporary work in or near a watercourse requires the use of wildlife-friendly products at all times. Please read the guidance below.

To minimize wildlife entanglement and plastic debris pollution, choose erosion and sediment control products that either do not contain netting, or that contain netting manufactured from 100% biodegradable non-plastic materials such as jute, sisal, or coir fiber. Degradable, photodegradable, UV-degradable, oxo-degradable, or oxo-biodegradable plastic netting (including polypropylene, nylon, polyethylene, and polyester) are discouraged for temporary controls and they are not acceptable alternatives for permanent controls. All netting materials used should have a loose-weave, wildlife-safe design with movable joints between the horizontal and vertical twines, allowing the twines to move independently and thus reducing the potential for wildlife entanglement. Avoid the use of silt fences reinforced with metal or plastic mesh. If you do use a plastic netted product for temporary stabilization, it must be promptly removed when no longer needed. For more detailed information visit http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf