

Lessons from the Field: Effective Storm Water Pollution Prevention and Erosion & Sediment Control Plans

Guam Stormwater Workshop
July 29, 2011

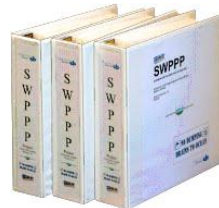


Session Objectives

- What is an effective SWPPP
- Proven practices for the design and implementation of effective SWPPP's and Erosion and Sediment Control Plans
- Common SWPPP Issues
- SWPPP and Site Map information and updating
- Inspection documentation and recordkeeping issues

What Does an Effective SWPPP Do?

- Identifies procedures the operator will implement to comply with the terms and conditions of the permit
- Identifies all potential pollution sources at a project site
- Describes the selection, design, installation, and maintenance of (BMPs) to reduce the contribution of pollutants to storm water runoff from the project site
- Provides **SITE-SPECIFIC** information



Commonly Observed SWPPP Issues

- Not developed **before** submitting NOI and start of construction land-disturbing activities
- Not maintained on site or readily accessible
- Not signed and certified
- Does not identify the person(s) or team responsible for maintaining and implementing the SWPPP
- Information included is not site-specific
- Not maintained/updated to reflect current site conditions
- Site map not reflective of current site conditions
- Lack of documentation, such as inspection reports and training records
- SWPPP does not include clear BMP maintenance requirements



SWPPP Certification

SECTION 8: CERTIFICATION AND NOTIFICATION

Instructions:

- The SWPPP should be signed and certified by the construction operator(s). Attach a copy of the NOI and permit authorization letter received from EPA or the state in Appendix D.
- For more information, see EPA's CGP Part 3, Subpart 3.12.A-D and Appendix G, Section 11.

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.

Name: Doug Lewis Title: Owner
Signature: Doug Lewis Date: 12/3/05

SWPPP excerpt from EPA Example Construction SWPPP: Medium-Sized (~20-acre) Residential Subdivision
(http://www.epa.gov/npdes/pubs/exampleswppp_residential.pdf)

SWPPP Site-Specific Information

- Permit holders often have a consultant prepare a SWPPP – these are typically based on generic templates
- A guide for developing a SWPPP for construction sites can be found on the USEPA website
<http://cfpub.epa.gov/npdes/stormwater/swppp.cfm#template>
- Some example of observed “boiler plate” language include:
 - Activities and materials / potential pollutant sources at the site
 - Inclusion of BMPs which are not actually utilized on site or appropriately selected for the project
 - Training requirements are generic or listed “as needed”
- Boiler plate SWPPPs that have not been customized are typically VOLUMINOUS and not user friendly!

Maintaining an Up-to-Date SWPPP

- Construction activities are dynamic and site conditions change often
- Maintaining an up-to-date SWPPP is a challenge, but one that must be met to ensure effective implementation
- BMPs selected by a SWPPP developer may prove not to be suitable for actual site conditions – changes must be made on site and the SWPPP must be revised accordingly
- Changes are often documented through “SWPPP Amendments”
- SWPPPs are “[Living Documents](#)” and should not be a dust collector!

Maintaining an Up-to-Date SWPPP (continued)

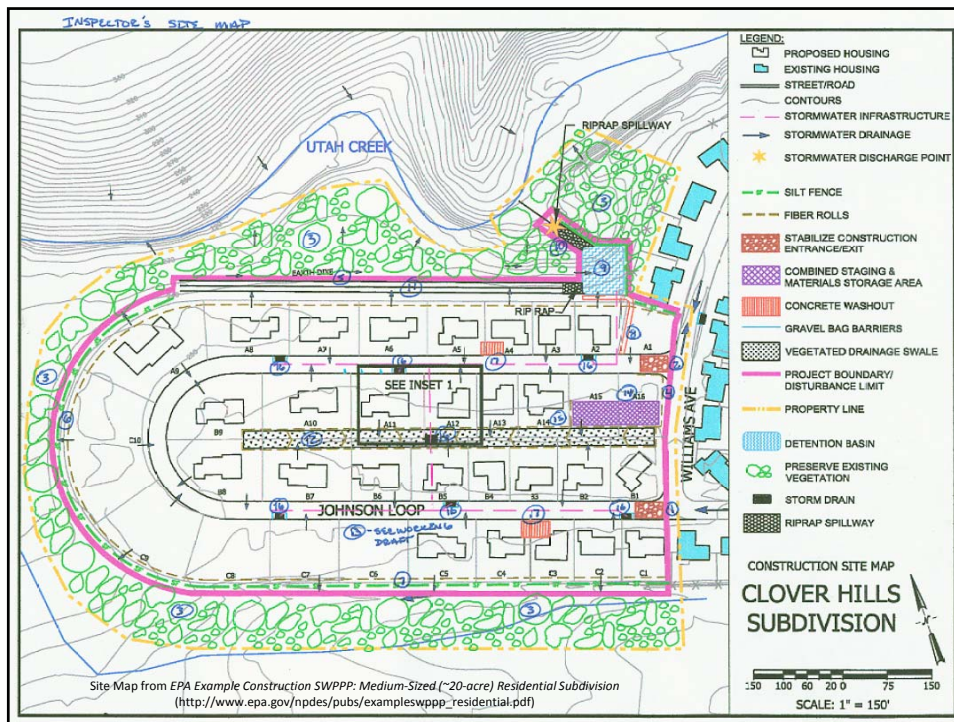
- Commonly observed SWPPP sections which are not kept up-to-date:
 - Construction activity schedule and phasing
 - [SWPPP Amendments](#)
 - Nature of construction activity taking place on site
 - Identification of all potential pollutant sources (e.g., staging areas, fueling areas, concrete washouts and batch plants)
 - Erosion and sediment control BMPs implemented on site
 - Staff training documentation

Maintaining an Up-to-Date Site Map

- Construction projects are dynamic and constantly changing
 - The site map should reflect **current site conditions**
 - This should enhance awareness of pollutant sources and help keep the SWPPP and BMP selections **"updated"**
- Commonly observed site map items which are not kept up-to-date:
 - Identification of disturbed areas
 - Identification of staging areas (e.g., vehicle and materials storage – stockpiles)
 - Location of SWPPP identified BMPs (structural/non-structural)

Maintaining an Up-to-Date Site Map (continued)

- Examples of creative site map solutions:
 - Large laminated site map which can be modified with erasable marker
 - Large paper site map with hard plastic covering that can be modified with erasable marker
 - Paper site map that is updated by hand
 - Areas of disturbance highlighted with a certain color or hatching
 - Use of legend and/or key to identify items
 - BMPs have specific emblems
 - Changes to site map are initialed and dated
 - New site map printed when modified site map is no longer usable

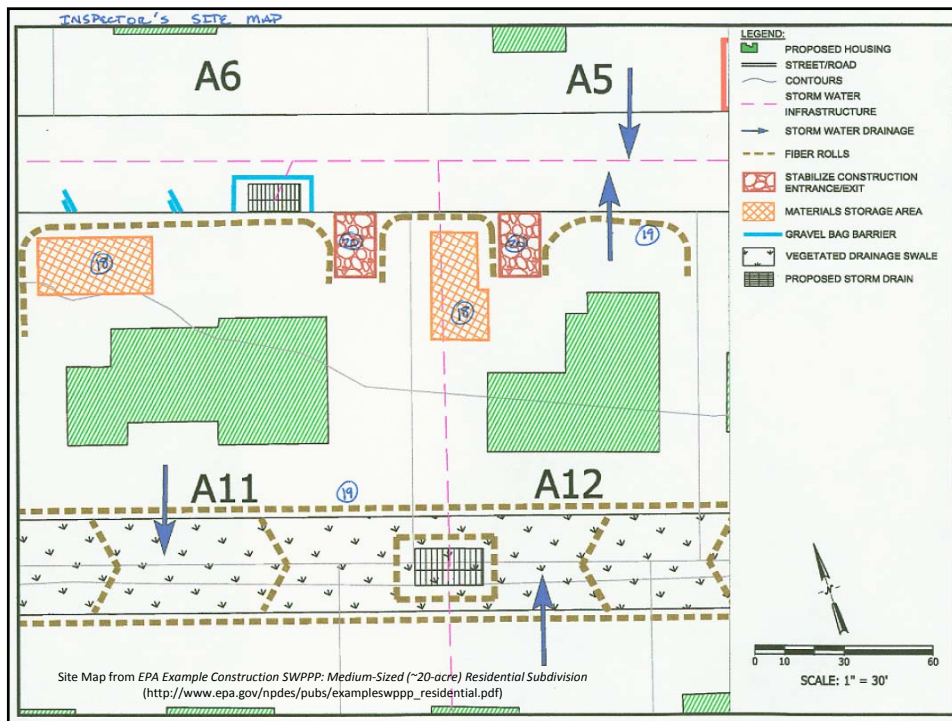


Maintaining Adequate Documentation

- Training Records
 - Should be conducted in accordance with SWPPP requirements
 - Training is often conducted but not documented
 - Training is not specific to SWPPP and pollution prevention
 - To an inspector, **adequate documentation provides tangible proof of its occurrence**
- Examples of documentation methods:
 - Create sign-in sheet for each training or meeting with a description of topics covered
 - Maintain separate binder specifically for training activities
 - Keep track of training in Excel tracking spreadsheet

Maintaining Adequate Documentation (continued)

- Inspection Records
 - Should be conducted in accordance with SWPPP and permit requirements
 - Inspection frequency need to be adhered to and/or exceptions documented
 - Inspections are often conducted but not documented
 - To an inspector, **adequate documentation provides tangible proof of its occurrence**
- Examples of documentation methods:
 - Maintain separate binder for inspection activities
 - Keep record of inspections in Excel tracking spreadsheet that references hardcopy inspection record in binder
 - Clearly indicate what BMPs and areas of site were inspected on the checklist
 - Utilize a site map with an inspection checklist



Documenting Corrective Actions

- Site issues will inevitably occur – site perfection is not a realistic goal – and, inspectors understand this!
- Therefore, demonstrate with inspection records that:
 - 1) issues and locations are identified by the site inspector; and
 - 2) the issues are addressed in a timely manner
- Photographs are an excellent way to document the occurrence of corrective actions
- Update applicable inspection record with corrective actions and **corrective action implementation dates** once completed

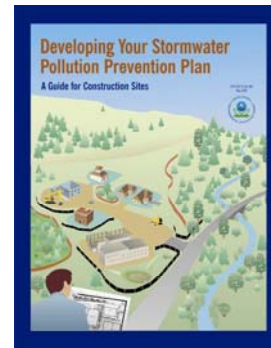
Summary Points

- Develop a clear, concise, **site-specific**, user-friendly SWPPP
- Use the permit requirements as the guide for your SWPPP development
- Require and specify one person or a small team of people to be in charge of SWPPP implementation and updates
- Organize SWPPP records (e.g., training, inspections) into separate binders that are maintained and updated regularly
- Create inspection forms or checklists containing permit required minimum information, and which suit your inspector's needs and inspection style
- Update your SWPPP and site map to keep them **"current"**!
- Retain SWPPP and all documentation for a period of 3 years from date of coverage and/or termination

Resources

- **Storm Water Pollution Prevention Plans for Construction Activities**

<http://cfpub.epa.gov/npdes/stormwater/swppp.cfm#template>



Questions?