E&S PLANS

Avoiding Common Deficiencies
E&S Plan – General 102.4(b)(4)

- E&S Plan must be separate from PCSM Plan & labeled “E&S” or “Erosion and Sediment Control Plan”

- Must be final plan for construction
  - Statements such as “Not for bidding” or “Not for Construction” may not be placed on these drawings

- Documentation provided that E&S Plan prepared by person trained & experienced in E&S design methods & techniques applicable to size & scope of project
• E&S Plan must be separate from PCSM Plan & labeled “E&S” or “Erosion and Sediment Control Plan”

• Must be final plan for construction

• Documentation provided that E&S Plan prepared by person trained & experienced in E&S design methods & techniques applicable to size & scope of project
• E&S Plan must minimize extent & duration of earth disturbance
• Must maximize protection of existing drainage features & vegetation
• Must minimize soil compaction
• Or utilize other measures or controls that prevent or minimize generation of increased stormwater runoff
Components of an E&S Plan

- The 15 Items from §Chapter 102.4(b)(5)
Components of an E&S Plan

1. Existing topographic features of project site & immediate surrounding area
2. Types, depth, slope, locations & limitations of soils
3. Characteristics of earth disturbance activity, including past, present & proposed land uses & proposed alteration to project site
4. Volume & rate of runoff from project site & upstream watershed area
Components of an E&S Plan

5. Location of all surface waters, which may receive runoff within or from project site & classification under Chapter 93

6. Narrative description of location & type of perimeter & on site BMPs used before, during, & after earth disturbance activity

7. Sequence of BMP installation & removal

8. Supporting calculations & measurements

9. Plan drawings
Components of an E&S Plan

10. Maintenance program

11. Procedures which ensure proper measures for recycling or disposal of materials associated with or from project site

12. Identification of natural occurring geologic formations or soil conditions that may have potential to cause pollution

13. Identification of potential thermal impacts to surface waters
Components of an E&S Plan

14. E&S Plan designed & implemented to be consistent with Post Construction Stormwater Management (PCSM)

15. Identification of existing & proposed riparian forest buffers
## Complete Plan Checklist

### Completeness Review Checklist

**Check-off:**
- C = Complete, NC = Not Complete

**Item Location:**
- D = PCSM Drawings, N = PCSM Narrative, D or N = Drawings or Narrative

### Standard E & S and PCSM Completeness Review Checklist

#### General

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- Fully completed, property signed and notarized Notice of Intent Form (1 original and 2 copies)
- Permit filing fee of $500 (general permit) or $1500 (individual permit) payable to the appropriate Clean Water Fund
- Disturbed acre fee payable to the Commonwealth of Pennsylvania Clean Water Fund
- Proof of receipt of municipal and county Acts 14, 67, 8, and 127 notices; copies of certified mail receipts or acknowledgment letters from the local municipality and county government
- The PNHP/PNDI Review receipt for the project area.
- Complete Erosion and Sediment Control Plan
- Complete Post Construction Stormwater Management Plan
- Fully completed General Information Form (GIF) (Individual Permits)
- PHMC coordination letter/clearance (Individual Permits for 10 acres or more of disturbance only)
- Complete Appendix A and use questions

### E & S Plan Planning & Design 102.4(b)(4)

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- The E&S Plan is separate from the PCSM Plan and labelled “E&S” or “Erosion and Sediment Control Plan” and is the final plan for construction.
- Documentation provided that E&S Plan was prepared by person trained and experienced in E&S design methods and techniques applicable to the size and scope of the project.
- E&S Plan minimizes extent and duration of earth disturbance
- E&S Plan maximizes protection of existing drainage features and vegetaion
- E&S Plan minimizes soil compaction
- E&S Plan utilizes other measures or controls that prevent or minimize generation of increased stormwater runoff

### Existing topographic features of the project site and the immediate surrounding area §102.4(b)(5)(i)

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<th>Applicant</th>
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</table>

- Topographic map(s) of the project site provided
- Location map (USGS quadrangle) provided

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[Logo of Pennsylvania Department of Environmental Protection]
# Technical Review Checklist

## Standard E&S Control Plan Technical Review Checklist

### Project Information
- **Project:**
- **Location:**
- **NPDES/Project No.:**
- **Date:**

### Check-Off
- **c = Compiles, d = Deficient, n = Not applicable**

### Item Location
- **D = E&S Drawings, N = E&S Narrative, D&N = Drawings and Narrative**

### The E&S Plan shall be prepared by a person trained and experienced in E&S control methods and techniques applicable to the size and scope of the project being designed

#### Name
- **Address**
- **Telephone No.**
- **D & N**

#### The existing topographic features of the project site and the immediate surrounding area
- **Legible mapping**
- **Existing contours**
- **Type of cover**
- **Existing improvements, i.e., roads, buildings, utilities, etc.**
- **Sufficient surrounding area**
- **Complete mapping symbols legend and north arrow**
- **USGS Location map, i.e., D or N**

#### The types, depth, slope, locations and limitations of the soils
- **Types, slopes, and locations of soil types**
- **Hydric soils**

#### The characteristics of the earth disturbance activity, including the past, present, and proposed land uses and the proposed alteration to the project site
- **Proposed NPDES boundary and limits of construction**
- **Proposed contours/grades**
- **Proposed waterways and storm water management facilities**
- **Proposed improvements, i.e., roads, buildings, utilities, etc.**
- **Past, present and proposed land uses**

#### The volume and rate of runoff from the project area and its upstream watershed area
- **Maximum during construction drainage areas**
- **Drainage discharge area(s) on USGS quadrangle map**
- **Discharge provided for non-curtain water discharge**

#### The location of all surface waters of the Commonwealth that may receive runoff within or from the project site and their classification under Chapter 93
- **Existing wetlands, wetlands, roadway, etc.**
- **Receiving watercourses**
- **Chapter 93 classification of streams or other waterbodies**

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*Note: Additional review criteria may apply based on specific project requirements.*
Existing topographic features 102.4(b)(5)(i)

• Legible topographic map(s) of the project site provided
  • All letters & numbers used on plans should be readable without magnification
  • Symbols used should be readily distinguishable from each other, & clutter avoided
    • Information pertinent to E&S plan should be shown on plan maps & drawings
    • All other information should be omitted
Existing topographic features 102.4(b)(5)(i)

• Name of plan designer along with his/her contact information should be provided
• All maps & drawings should be clearly labeled & dated
• Revised maps should have date of each revision shown
• For permitted sites, sufficient space should be provided on top sheet for approval stamp & signature of reviewing agency
Existing topographic features 102.4(b)(5)(i)

- At least one set of maps & drawings submitted to any agency for review should be full size
- For linear projects submit composite plan map showing entire project, or major portions thereof, proposed contours, E&S BMPs, & staging or work area boundaries
- Appendix D in E&S Manual provides further guidance
Existing topographic features 102.4(b)(5)(i)

• Common deficiencies:
  • Type of cover
    • Forest
    • Meadow
    • Lawn
    • Abandoned Surface Mine
    • Pavement
  • Sufficient surrounding area
    • Tributary drainage areas & receiving watercourses
    • If beyond coverage of plan maps, may be shown on USGS topographic map
Existing topographic features 102.4(b)(5)(i)

- Legible location map (USGS quadrangle) provided

Location map should be an insert on plan drawings
Soils Information 102.4(b)(5)(ii)

- Locations of soils may be delineated on plan maps or on separate site map.
- Legible photocopy of portion of NRCS website maps (or Penn State website maps) on which proposed project can be clearly shown may also be used.
  - Locations of all proposed sediment basins & traps should be shown on any separate or NRCS maps.
Soils Information 102.4(b)(5)(ii)

• Typical plan map showing soil boundaries
• Typical soil map from website
Soils Use Limitations

- Data on physical characteristics of soils, such as texture, resistance to erosion & suitability for intended use to be included in narrative
- Only limitations relevant to proposed project should be cited
- Appendix E lists some of most common soil use limitations for soils in Pennsylvania
<table>
<thead>
<tr>
<th>SOIL NAME</th>
<th>CUTBANKS CAVE</th>
<th>CORROSIVE TO CONCRETE/STEEL</th>
<th>DROUGHTY</th>
<th>EASILY ERODIBLE</th>
<th>FLOODING</th>
<th>DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE</th>
<th>HYDRIC/ HYDRIC INCLUSIONS</th>
<th>LOW STRENGTH / LANDSLIDE PRONE</th>
<th>SLOW PERCOLATION</th>
<th>PIPING</th>
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Soils Use Limitations

• Simply copying Appendix E into narrative **NOT SUFFICIENT** to meet requirements of this section
• Means to address identified soils limitations should be included on drawings

**SOILS, LIMITATIONS AND RESOLUTIONS**

AR - ARMACH - SILT LOAM TO CHANNERY CLAY LOAM
- SEASONAL HIGH WATER TABLE
- VERY HIGH SURFACE RUNOFF
- PH RANGE 4.5-5.5
- BEDROCK 40-60 IN DEEP

BPA - BRINKERTON - CHANNERY SILT LOAM
- HIGH WATER TABLE
- VERY HIGH SURFACE RUNOFF
- PH RANGE 4.5-7.1
- BEDROCK 15-30 IN DEEP

PU - PURDY - SILT & CLAY LOAM
- SEASONAL HIGH WATER TABLE
- PH RANGE 3.8-5.5

OUA - ODORIENTS - CHANNERY SILT LOAM
- HIGH WATER TABLE
- MEDIUM SURFACE RUNOFF
- PH RANGE 4.5-6.4

BNB - BLAIRTON - CHANNERY SILT LOAM 3 TO 8 % SLOPES
- HIGH WATER TABLE
- MEDIUM SURFACE RUNOFF
- PH RANGE 5.1-7.0
- BEDROCK 20-40 IN DEEP

CAB - CASCOE - SILT CLAY LOAM
- HIGH WATER TABLE
- HIGH SURFACE RUNOFF
- PH RANGE 4.5-5.5
- BEDROCK 40-60 IN

THE SOIL LIMITATIONS SHALL BE ADDRESSED AS FOLLOWS:

ACIDIC SOILS: A SEED MIXTURE, WITH THE PROPER SOIL AMENDMENTS, SHALL BE USED THAT IS SUITABLE FOR THIS CONDITION. WHERE PROPER COVER CANNOT BE ESTABLISHED, SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE REQUIRED SEEDING MIX FOR THE GIVEN CONDITIONS.

SEASONAL HIGH WATER TABLE: WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. VEGETATIVE SPECIES SHALL BE TOLERANT OF WET CONDITIONS (INUNDATION).

SLOPE: WHERE NECESSARY, STABILIZE STEEP SLOPES IN ACCORDANCE WITH THE PA DEP EROSION AND SEDIMENT POLLUTION PROGRAM MANUAL.

STONINESS: WHEN FILTER FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, FILTERXX SILT SOXX SHALL BE INSTALLED.

SUSCEPTIBILITY TO PIPING IN EMBANKMENTS: PROPER TECHNIQUES WILL BE UTILIZED IN CONSTRUCTING THE BASIN EMBANKMENTS. LIFTS WILL BE IN MAXIMUM OF 12 INCHES. EACH LIFT WILL BE COMPACTED PROPERLY. THE SOIL WILL BE SIFTED SO THAT NO LARGE STONES WILL BE USED INSIDE THE EMBANKMENT IN ACCORDANCE WITH PADEP’S EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL.

POOR SOURCE OF TOPSOIL: SOME SOILS MAY BE LIMITING FOR TOPSOIL USE DUE TO THEIR COARSE STONY COMPOSITION. DUE TO THE FACT THAT THE MAJORITY OF THE SITE WILL BE EITHER BUILDING OR PAVEMENT, THE AREAS THAT WILL RECEIVE TOPSOIL WILL BE RELATIVELY SMALL COMPARED TO THE OVERALL AREA THAT IS GRUBBED. THEREFORE, ANY SUITABLE TOPSOIL WILL BE STOCKPILED AND REUSED AND IF NECESSARY, ADDITIONAL TOPSOIL WILL BE EITHER SIFTED ON-SITE OR BROUGHT IN.
Past, Present and Proposed Land Uses

• Past land uses = actual land use(s) of project site for past 50 years (or longer if known)
  • Not just zoning

• Present land uses = dominant land uses of project site for 5 years preceding
  • Not just zoning

• For sites requiring an NPDES permit, contained in completed NOI

• For non-permitted sites, should be included in narrative
Volume & Rate of Runoff

• Maximum potential drainage area to a BMP at any stage of the project should be used to determine required design capacity

• Rational Method & Modified Rational Method may not be used to calculate water quality, infiltration, or capture volumes for PCSM BMPs
Volume & Rate of Runoff

- Alterations to drainage patterns, impervious coverage or other watershed characteristics may necessitate Off-Site Stability Analysis.
- Stream stability analysis necessary where discharges anticipated to overburden receiving stream (most notably headwaters).
- For increase in rate or volume to receiving waterway ≥10%, stream stability analysis should be included in narrative addressing impact of discharge on watercourse’s ability to resist erosion.
Receiving Surface Waters

• All streams in Pennsylvania are classified based on designated & existing water uses & water quality criteria

• Designated uses for surface waters are found in 25 Pa. Code §§ 93.9a—93.9z

• Link: http://www.pacode.com/secure/data/025/chapter93/chap93toc.html
Receiving Surface Waters

- Existing uses of surface waters usually same as designated use, except where DEP has accepted information that particular water body actually attains a more stringent water use than designated use.

- Existing uses protected pursuant to 25 Pa. Code §§ 93.4a—93.4c. Existing uses may be obtained from DEP’s website at:

  http://www.portal.state.pa.us/portal/server.pt?pageid=514&objID=553974&mode=2
For discharges to High Quality [HQ] or Exceptional Value [EV]) waters, more stringent criteria used to design BMPs

**Nondischarge alternatives are to be used wherever possible**

If during 2-year/24-hour storm event, not possible to avoid increasing rate or volume of runoff from disturbed areas to HQ or EV waters, ABACT BMPs must be used to fullest extent possible
Narrative Description of BMPs

- For permitted sites, provided when NOI properly completed
- Otherwise should be included in narrative
Sequence of BMP Installation & Removal

- Complete schedule of installation & removal of erosion control BMPs as they relate to various phases of earthmoving activities
- Minimize time of disturbance without unnecessarily restricting construction process
- Site-specific
- Appropriate E&S BMPs to be in place & functional before earth disturbance occurs within any given drainage area
- Chapter 2 provides additional guidance on BMP sequencing
Supporting Calculations

• Narrative should contain:
  • Drainage areas (copies of work maps)
  • Anticipated flow rates & velocity
  • Proposed method of stabilization (channel liners)
  • Required & design storage volumes
  • Discharge rates & volumes

• Standard worksheets in Appendix B of Manual

• Use of standard worksheets recommended in order to expedite plan reviews

• Failure to provide all information requested by appropriate worksheet(s) constitutes administrative incompleteness
# Standard Worksheets

## CHANNEL DESIGN DATA

<table>
<thead>
<tr>
<th>PROJECT NAME:</th>
<th>LOCATION:</th>
<th>PREPARED BY:</th>
<th>DATE:</th>
<th>CHECKED BY:</th>
<th>DATE:</th>
</tr>
</thead>
</table>

### CHANNEL OR CHANNEL SECTION
- Temporary or Permanent

### Design Storm

<table>
<thead>
<tr>
<th>Activity</th>
<th>Multiplier (1.5, 2.25, or 2.75)</th>
<th>Q&lt;sub&gt;r&lt;/sub&gt; (REQUIRED CAPACITY) [CFS]</th>
<th>Q&lt;sub&gt;c&lt;/sub&gt; (CALCULATED AT FLOW DEPTH [D]) [CFS]</th>
</tr>
</thead>
</table>

### PROTECTIVE LINING
- n (MANNING'S COEFFICIENT)<sup>2</sup>
- υ<sub>v</sub> (ALLOTTED VELOCITY) [FPS]
- υ<sub>r</sub> (CALCULATED FLOW VELOCITY) [FPS]

### CHANNEL BOTTOM WIDTH (FT)

### CHANNEL SIDE SLOPES (H/V)

### D (TOTAL DEPTH) [FT]

### CHANNEL TOP WIDTH @ D (FT)

### Channel Top Width @ Flow Depth (d) [FT]

### Bottom Width: Flow Depth Ratio (12:1 MAX)

### z [STONE SIZE] [IN.]

### A (CROSS-SECTIONAL AREA IN SQ. FT.)

### R (HYDRAULIC RADIUS)

### s (BED SLOPE, FT/FT)<sup>2</sup>

### S (CRITICAL SLOPE) 7.5<sup>2</sup>

### 1.3 S<sup>2</sup>

### STABLE FLOW [W/N]

### FREEDWARD BASED ON UNSTABLE FLOW [FT]

### FREEDWARD BASED ON STABLE FLOW [FT]

### MINIMUM REQUIRED FREEDWARD [FT]

### DESIGN METHOD FOR PROTECTIVE LINING

### PERMISSIBLE VELOCITY (V) OR SHEAR STRESS (S)

---

1. Use 1.5 for Temporary Channels; 2.25 for Temporary Channels in Special Protection (HO or EV) Watersheds; 2.75 for Permanent Channels. For Rational Method, enter "NA" and attach Worksheets 9 and 10. For TR-65 enter "NA" and attach appropriate Worksheets.
2. Adjust "n" value for changes in channel liner and flow depth. For vegetated channels, provide data for manufactured linings without vegetation and with vegetation in separate columns.
3. Slopes may not be averaged.
4. Minimum Freeboard is 0.5 ft. or % Total Channel Depth, whichever is greater.
5. Permissible velocity lining design method is not acceptable for channels with a bed slope of 10% or greater. Shear stress lining design method is required for channels with a bed slope of 10% or greater. Shear stress lining design method may be used for any bed slope.

---

## COMPOST FILTER SOCKS

- 2" X 2" WOODEN STAKES PLACED 18" O.C.
- BLOWN/PLACED FILTER MEDIA
- UNDISTURBED AREA
- COMPOST FILTER SOCK
- DISTURBED AREA

<table>
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<tr>
<th>SOCK NO.</th>
<th>LOCATION</th>
<th>SLOPE PERCENT</th>
<th>SLOPE LENGTH ABOVE BARRIER (FT)</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
Plan Drawings

- Locations of BMPs should be shown on map(s)
Plan Drawings

- Construction details & specifications for BMPs should be included on plan drawings
Plan Drawings

- Standard construction details from the Manual may be used.
- CADD details available at:
  [link](http://www.portal.state.pa.us/portal/server.pt/community/stormwater_management/21377)
- Many standard details have attached notes in bold type - these notes are part of that detail.
- Many details & standard worksheets contain tables of dimensions that should be copied onto E&S plan drawings.
Standard Notes

• Appendix C contains standard notes that should be placed on plan drawings
• Optional notes also provided & should be used where appropriate
• Additional notes may be added as needed so long as they do not contradict standard notes, details, sequence, or maintenance requirements
Temporary Access Roads

• Construct only as much road as necessary
  • Minimize clearing
  • Keep road width to minimum

• Terminal Points - Locate start & end of road system using best access that is safe & visible from public roads

• Grades – Max slope of 10 % & min of 2 % easiest to maintain - Follow contour as much as possible

• Topography - Avoid steep slopes wherever possible
Temporary Access Roads

- Often primary source of sediment pollution especially during early stages of construction
Temporary Access Roads

- **Drainage** - use crowned or insloped surfaces & install ditch relief culverts at intervals shown in Table 3.3 or 3.4 (Provide outlet protection)
- **Grading** - Minimize cuts & fills work
- **Obstacles** - go around springs, seeps, wetlands, poor drainage areas, ledges, & rocky areas wherever possible
- **Soils** - Design for soil texture, drainage class, & slope position as outlined in Appendix E
Temporary Access Roads

• Distances from Streams – Maintain buffer areas along stream corridors (Wherever sufficient filter strips not possible between roadways & receiving waters, install BMPs, such as wood chip berms, silt fence, etc.)

• Stream Crossings - Minimize number of stream crossings
  • Cross at 90° angle & approach stream at as gentle a slope as possible
  • Consider all stream crossings temporary
  • Only bridges or culverts – No fords
Temporary Access Roads

• Old roads - use existing roads wherever possible - carefully evaluate road’s suitability for upgrading

• Floodways & wetlands
  • Avoid encroaching on wetlands
  • Roadway construction within floodways (typically 50 ft from top of streambank) & wetlands require encroachment permits
Temporary Access Roads

- Water control structures - Carefully plan use of broad-based dips, waterbars, culverts, & ditches to maintain existing flow patterns & minimize amount of runoff being conveyed by roadways & roadside ditches.
Common Problems

• Access – How will contractor access proposed BMP locations?
  • Large compost socks
Common Problems

- Access – How will contractor access proposed BMP locations?
  - Large compost socks
  - Super Silt Fence - post hole drills
Common Problems

- Access – How will contractor access proposed BMP locations?
  - Large compost socks
  - Super Silt Fence - post hole drills
  - Large Riprap
Channels

• Align all channels & berms to provide positive drainage throughout
• Avoid sharp turns, high angles of confluence, & very low gradients (< 1% bed slope)
• Pooled water also a Slope Stability issue
Channels

- Align all channels & berms to provide positive drainage throughout
- Avoid sharp turns, high angles of confluence, & very low gradients (< 1% bed slope)
- Provide suitable protective linings
- Use of check dams is not acceptable alternative to properly designed channel lining
• Align all channels & berms to provide positive drainage throughout
• Avoid sharp turns, high angles of confluence, & very low gradients (< 1% bed slope)
• Provide suitable protective linings
• Use of check dams is not an acceptable alternative to a properly designed channel lining
• Provide adequately sized temporary crossing pipe where needed for construction traffic
Diversion Channels

- Do not cut old growth trees to put in a diversion channel unless absolutely necessary
- Do not locate diversions on steep slopes
- Do not use diversions where there is no good outlet (Earthen level spreaders are not a good outlet)
Basins & Traps

• Not enough guidance on construction of embankments (See Chapters 7 & 8 in E&S Manual)
  • Keyways
  • Compaction
  • Stabilization

• Details
  • Water-tight connections
  • Anti-seep collars
  • Critical dimensions & elevations

• Design of outlet channels
Common Problems

• Conflicts with existing/proposed utilities
Common Problems

- Access – How will contractor access proposed locations?
- Conflicts with existing/proposed utilities
- Wetland/stream encroachments
Common Problems

- Access – How will contractor access proposed locations?
- Conflicts with existing/proposed utilities
- Wetland/stream encroachments
- Unsuitable soils not addressed

Low Shear Strength

Piping
Outlet Protection

- Do not use Figure 9.3 or 9.4 to design Riprap Aprons below Box Culverts
Outlet Protection

• Consider using other forms of outlet protection
  • Flow Transition Mats
  • Stilling Basins
  • Stilling Wells
  • Drop Structures
  • T-Outlets (see Jim or Kathy for detail)
  • Infiltration Berms (low volume – see Stormwater Manual)
Stabilization Problems

- Revegetation not adequately addressed
  - Unsuitable soil conditions
  - Seed mixtures not compatible with site conditions
  - No soil testing
  - Too much dependence on hydroseeding
  - Blanketing not provided where needed
BMP Retirement Problems

• Removal/conversion of Temporary BMPs not adequately addressed
  • Definition of vegetative stabilization unclear
  • Removal of temporary BMPs not specified
  • Method of converting temporary BMPs to permanent BMPs not specified
Maintenance

• Both temporary & permanent BMPs
• Include schedule for inspection of various BMPs after each runoff event & on weekly basis
• Guidance for BMP maintenance provided in E&S Manual
• DEP forms documenting inspections to be kept on site at all times
• Document # 3150FM-BWEW0083 2/2012
• Maintenance section should specify use of this form
Maintenance

VISUAL SITE INSPECTION REPORT

Note: It is a condition of National Pollutant Discharge Elimination System and Erosion and Sediment permits that a maintenance program be conducted to provide for the operation and maintenance of all BMPs to be inspected on a weekly basis and after each stormwater event. Please list in the space provided comments to note if repairs or replacement are needed or have been made for BMPs as a result of the inspection. Failure to conduct the required inspection may result in permit suspension or the imposition of civil penalties. If supplemental monitoring is required as part of a permit condition this form may be used to meet those monitoring requirements.

Project Site Name: ___________________ Date: _______________ Inspection #: _______________

Time: _______________ Weather: _______________

Permit #: ___________________ Photos Taken: Yes ☐ No ☐

Inspector/Title: ___________________

Municipality(ies): ___________________

County(ies): ___________________

Inspection Type (check one): Weekly ☐ Stormwater Event ☐

1. Are the approved (Stamped) E & S plan and PCSM plan present on site? ☐

2. Are there activities occurring outside of the limits of disturbance shown on the plan drawings? (If yes, notify conservation district and explain.) ☐

3. Is the Construction Sequence being followed? (If no, notify conservation district and explain.) ☐

4. E & S BMPs (List BMPs and note if initiated and maintained as per the plan.) ☐

Where repairs/maintenance/replacement BMPs are necessary (If so, describe): __________________

Company Name: ___________________

Inspector’s Signature: ___________________ Date: ________

Attach additional sheets for comments/repairs/remedial measures if necessary.
Recycling or Disposal

• Construction wastes include:
  • Excess soil materials
  • Building materials
  • Concrete wash water
  • Sanitary wastes, etc.

• Measures should provided for:
  • Housekeeping
  • Materials management
  • Litter control

• Recycling preferred, rather than disposal
• Note requiring recycling of waste materials, where feasible, should be added to plan drawings
Geologic & Soil Conditions

• Geologic formations containing minerals (e.g. pyrite) in sufficient quantities that could result in discharges not meeting water quality standards for receiving surface water(s) must be identified
  • Geologic reports
  • Exploratory or water well drilling records
  • Site history

• Locations of formations containing those minerals (if not site wide) shown on e plan maps

• Measures to prevent such discharges (including but not limited to, proper handling, isolation, disposal, etc.) provided on plan drawings with typical details
Potential Thermal Impacts

- Analysis of how thermal impacts associated with project will be avoided
  - Less rock, asphalt & concrete
  - More vegetation (especially trees & shrubs)
  - Maintain existing water courses & buffers wherever possible
- If thermal impacts cannot be avoided, describe how impacts minimized & BMPs that will mitigate impacts in a manner that will protect & maintain water quality in surface waters
- Additional information on minimizing thermal impacts can be found in Pennsylvania Stormwater Best Management Practices Manual
E&S Plan Compatible with PCSM Plan

- Protect buffer areas
- Minimize soil compaction
- Location of E&S BMPs not in conflict with PCSM BMPs
- Protection of PCSM BMPs during construction
- Permanent basins constructed to PCSM requirements initially
- Stormwater designers talk to E&S designers
Riparian Forest Buffers

- Where required by permit
  - Certain restrictions on earthmoving within 150 feet in special protection watershed
  - Watersheds not meeting water quality in Category 4 & 5 on Pennsylvania’s Integrated Water Quality Monitoring and Assessment report
- Voluntary
  - 100 feet width
  - Non-discharge requirement assumed to be met
- Locations shown on map(s)