



Stormwater Management on Construction Sites

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Today's Program

1. Overview of Stormwater Requirements
2. Legal Issues: Contractors Beware
3. Technical Issues: SWPPP Requirements
4. Conclusion
5. Questions

Overview of Stormwater Law

- Federal Water Pollution Control Act of 1972
- Section 402: Point source discharges must be permitted
- Subsection (p) added in 1987: Stormwater discharge permitting phased in over time
- Under Phase II, all construction sites one acre or more in disturbed area required a permit
- Since 1992, EPA issued a series of “national” Construction General Permits (CGP)
- Latest CGP issued 2.16.2017 as modified 6.27.2019

National Pollutant Discharge Elimination System (NPDES) Permit

- Permitting Authority delegated to the States *except* in Massachusetts, New Hampshire, Idaho, New Mexico, DC, and most territories, Indian Country Lands, and federal projects throughout the U.S.
- Individual permits and General permits, each permit term not exceeding 5 years
- EPA's Effluent Limitation Guidelines (ELGs) for the Construction & Development point source category (known as the C&D Rule) established nationwide requirements

EPA Minimum Requirements, 40 CFR 450.21

Multi-Step Approach:

1. Erosion and sediment controls
2. Soil stabilization
3. Dewatering
4. Pollution prevention measures
5. Prohibited discharges

Key Issues for Contractors

- Multiple Operators & Designated Stormwater Team
- eNOI Filing required by all operators
- Detailed, site specific SWPPP
 - Fifty Foot Buffers
 - Soil Pile Requirements
 - Vehicle Exit/Entrance
 - Dewatering
- Construction Support Activities
- Training

Multiple “Operators”

- All operators are required to obtain permit coverage independently (except *subcontractors*)
- Permit coverage is obtained by filing an eNOI (electronic Notice of Intent) by each operator
- Multiple operators may share a single Stormwater Pollution Prevention Plan (SWPPP) so long as respective duties are clearly defined in the SWPPP
- All operators are responsible for permit compliance even if duties are divided, but each operator does not have to perform every task (Permit Modification)

Designated Stormwater Team

- Section 7 Minimum SWPPP requirement
- Must assemble a “stormwater team” for each project
- Must identify personnel by name or position
- Must specify each team member’s individual responsibilities
- Must ensure each team member is trained to specific requirements
- Each team member must have ready access to the permit documents and SWPPP

eNOI Filing Requirements

- All operators are required to separately file an electronic Notice of Intent (eNOI)
- Form & Instructions, Appendix J to the CGP
- Must have an EPA Central Data Exchange (CDX) account (instructions on EPA's website)
- Requires detailed site specific information to complete the form
- Certification requirements
- Must have completed SWPPP prior to filing

Certification Requirements

- 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.*

Person authorized to certify

- Standard Permit Conditions- App. I, Section 1.11
- Responsible Corporate Officer (President, Treasurer, VP, policy-making function, manager if authorized)
- SWPPP, SWPPP modification, or SWPPP compliance reports (inspections, corrective actions, etc.) can be certified by either a responsible corporate officer *or* a duly authorized representative
 - But only *if* authorization is in writing by the responsible corporate officer and *if* the person authorized has overall responsibility

Site Specific SWPPP– Contractor Concerns

- Detailed Site Specific Plan and Construction Details (not “Typical”)
- Perimeter Controls
- Fifty Foot Buffers
- Soil Pile Requirements
- Vehicle Exit/Entrance
- Dewatering
- Construction Support Activities
- Training

Construction Support Activities

- Equipment staging areas
- Material storage areas
- Soil stockpiles
- Construction yard
- Portable toilets
- Must identify contractors responsible for each activity
- Must identify specific locations on site plan

Training

- The following personnel, at a minimum, must receive training, and should be listed individually:
 - Personnel responsible for the design, installation, maintenance, and/or repair of stormwater controls (including pollution prevention measures);
 - Personnel responsible for the application and storage of treatment chemicals (if applicable);
 - Personnel who are responsible for conducting inspections as required; and
 - Personnel who are responsible for taking corrective actions.

Training

- Site specific and SWPPP specific training requirements
- Position specific training
 - Consistent with job duties
 - Minimum familiarity
- Subcontractors & outside service providers
 - No requirement to provide formal training
 - BUT must ensure they understand the permit requirements applicable to them

Record Keeping

- Requirements scattered throughout the Permit
 - SWPPP and any modifications
 - Inspection reports
 - Corrective action reports
 - Proof of training (included in SWPPP)

Template SWPPP

- Template SWPPP
 - Section 1: Responsible Parties
 - Section 2: Site Evaluation, Assessment & Planning
 - Section 3: Documentation of Compliance with Other Federal Requirements
 - Section 4: Erosion & Sedimentation Controls
 - Section 5: Pollution Prevention Standards
 - Section 6: Inspections and Corrective Actions
 - Section 7: Training
 - Section 8: Certifications

Section 1: Responsible Parties

- Provide Contact Information/Responsible Parties
 - Operator(s)/Subcontractor(s) – Contact Information
 - Owner/Operator
 - Contractor/Operator (may have Subcontractors)
 - 24-hour Emergency Contact
 - Define Stormwater Team and Responsibilities
 - Project owner & owner's authorized representative
 - Project contractor
 - SWPPP qualified person: monitoring and compliance

Section 2: Site Evaluation, Assessment, & Planning

- 2.1 Project & Site Information
 - location and site information
- Is the project/site located on Indian country lands, or located on a property of religious or cultural significance to an Indian tribe? Identify the tribe
- If you are conducting earth-disturbing activities in response to a public emergency, document the cause (*e.g., natural disaster, extreme flooding conditions*), and its occurrence (*e.g., state disaster declaration*).
 - Submit NOI within 30 days of start of earth disturbance

2.2 Discharge Information

- Description: *The existing drainage system discharges directly to the waters of the Flowing River through a closed drainage system that is comprised of a series of catch basins, drain lines, leaching trenches, and outfall pipes.*
- Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?
- Are there any surface waters/wetlands that are located within 50 feet of your construction disturbances?

2.2 Discharge Information

- Name(s) of the first surface water that receives stormwater directly from your site and/or from the MS4
e.g. *Flowing River*
- Need information specific to the receiving water including whether it is “impaired,” subject to a TMDL (Total Maximum Daily Load), or a Tier 2, 2.5 or 3 designation
 - Should be determined by the owner’s environmental consultant

2.3 Nature of Construction Activity

- Include a General Description of the Project, e.g.:
 - *The Project consists of the development of approximately 28 acres of land located off of Riverside Avenue in Central Town, Massachusetts (hereafter referred to as “the site”). The site is owned and operated by Riverside Development, LLC (hereafter referred to as “the Owner”).*
 - *The site topography is relatively flat, ranging in elevation from approximately 49 to 55 feet above sea level. An Outstanding Resource Water (ORW) is located off-site but adjacent to The Site.*

General Description of the Project

- Specific activities include, e.g.:
 - *Building South Residence (Lot 3) – 64,000 SF*
 - *Building North Office/Retail – 23,000 SF*
 - *Parking – 34,000 SF*
- *Activities proposed in these locations include the construction of two (2) residential buildings, and one multiuse office/retail building with associated parking, site lighting and landscape improvements. In addition, the project includes tying new structures into the storm drain, sewer, and water infrastructure.*

General Description of the Project

- Total property size: 28.0 acres
- Total area expected to be disturbed by construction: 5 acres (approx.)
- Estimated maximum area to be disturbed at any one time: 3.0 acres (approx.)
- *The maximum area to be disturbed at any one time throughout the course of construction is estimated at approximately 3.0 acres. However, active disturbance at any one time may vary significantly depending on the nature and phase of construction.*

Construction Support

- List contractors responsible for specific support tasks:
 - Staging
 - Materials storage
 - Cement management
 - Portable Toilets
- Identify locations where construction support activities will occur on site plan

2.4 Sequence and Construction Schedule

- Include estimated dates of construction activities for completed, ongoing, and future activities at the site.
 - *Installation and maintenance of S&EC controls (perimeter & specific activity controls, stabilized construction ingress/egress, ...)*
 - *Rough grading and earthwork*
 - *Trenching and installation of utilities including...*
 - *Installation of parking lots*
 - *Construction of residential/commercial buildings*
 - *Installation of site lighting and landscape improvements*
 - *Final grading/stabilization*
 - *Final site cleanup*

Shared Site Components

- Describe shared site components, if any
 - e.g. *Roadway improvements associated with proposed activities*
 - *Installation and maintenance of S&EC*
 - *Intersection improvements and addition of turning lanes & traffic signals.*
 - *Full-depth construction of widened intersection areas.*
 - *Installation of bituminous concrete overlay and pavement markings.*
 - *Reconstruction of concrete sidewalks.*

2.5 Allowable Non-Stormwater Discharges

- Discharges from emergency fire-fighting activities
- Fire hydrant flushings
- Landscape irrigation
- Waters used to wash vehicles and equipment (but no soaps)
- Water used to control dust
- Potable water including uncontaminated water line flushings
- Routine external building wash down (but not if hazardous substances present)
- Pavement wash waters
- Uncontaminated air conditioning or compressor condensate
- Uncontaminated, non-turbid discharges of ground water or spring water
- Foundation or footing drains
- Construction dewatering*

2.6 Site Maps

- Boundaries of the property and of the locations where construction will occur
- Locations of all surface waters, including wetlands, that exist on or near the site, including impaired or Tiered waterbodies
- The boundary lines of any natural buffer areas.
- Areas of federally-listed critical habitat for endangered or threatened species (MA requires that state polygons be shown as well)

2.6 Site Maps

- Topography of the site, existing vegetative cover, and drainage pattern(s) of stormwater and allowable non-stormwater flow onto, over, and from the site property before and after major grading activities
- Stormwater and allowable non-stormwater discharge locations
- Locations of all potential pollutant-generating activities
- Locations of stormwater control measures
- Locations where polymers, flocculants, or other treatment chemicals may be used and stored

3.0 Documentation of Compliance with Other Federal Requirements

- Endangered Species Protection
 - Coordinate with MA NHESP
- Historic Preservation
 - Coordinate with MHC
- Safe Drinking Water Act Underground Injection Control Requirements
 - MassDEP Permit requirements:
<http://www.mass.gov/dep/water/drinking/uic.htm>

Section 4 Erosion & Sedimentation Controls

- Natural Buffers or Equivalent Sediment Controls
- Perimeter Controls
- Sediment Track-out
- Stockpiled Sediment or Soil
- Minimize Dust
- Minimize Disturbance of Steep Slopes
- Treatment of Top Soils
- Soil Compaction
- Storm Drain Inlets
- Use of Treatment Chemicals
- Constructed Stormwater Conveyance Channels
- Sediment Basins
- Dewatering Practices
- Site Stabilization

Natural Buffers

- Required if earth-disturbing conditions occur within 50 feet of a surface water or wetland;
- Or establish sediment and erosion controls that provide sediment load reduction equivalent to a 50 foot undisturbed zone (Appendix G of the CGP)
- Document in the SWPPP what is proposed.

Perimeter Controls

- Describe specific controls: silt fences, filter berms, temporary diversion dikes, fiber rolls
- For linear projects, if entire perimeter is not protected you must explain why it is impracticable to include the entire site

Sediment Track-out

- Describe specific efforts to minimize track-out
- Describe specific entry/exit locations
- Specific requirements for linear projects
- Consult EPA FAQ for best practices
- Hosing down and/or sweeping into areas with sediment controls is no longer permitted

Specific Erosion & Sedimentation Controls

- Design controls specific to the site (Appendix G of CGP)
- Minimize the amount of soil exposed during construction
- Catch basin protection



Dewatering

- Direct to vegetated areas or use velocity dissipation devices



Stockpiles

- Stabilize and protect from erosion and wind
- Berm requirements



Treatment of Topsoil



- Preserve Topsoil – may entail soil separation
- Avoid Soil Compaction
- Berm requirements

Stabilization

- Initiate soil stabilization measures immediately whenever earth-disturbing activities have temporarily or permanently ceased
- Temporary - idle for 14 or more calendar days (or 7 days if more than 5 acres disturbed at one time)



Section 5 Pollution Prevention Standards

- Potential Sources of Pollution
- Spill Prevention and Response
- Fueling and Maintenance of Equipment or Vehicles
- Washing of Equipment and Vehicles, Containers
- Storage, Handling, and Disposal of Construction Products, Materials, and Wastes
 - Building Products, Pesticides, Fertilizers, Diesel Fuel, Oil, Hazardous Materials, Construction & Domestic Waste, Sanitary Waste

Section 5 Pollution Prevention Standards

- Fertilizers
 - Special procedures to minimize nitrogen or phosphorus discharge from fertilizers
 - E.g., do not over-apply
- Must cover all inactive material or debris stockpiles
- Must close all waste container lids

Section 6 Inspection and Corrective Action

- Document
 - Inspection Personnel and Procedures
 - Specific Inspection Frequency
 - Use of Rain Gauge & location
 - Corrective Action
 - Identify personnel responsible
 - Delegation of Authority
 - Include copy of executed document

Inspection Requirements

- Inspect at least once every 7 calendar days *or* once every 14 calendar days and within 24 hours of a storm event of 0.25 inches or greater
- For sensitive sites (impaired waters or Tiered waters), inspect once every 7 days *and* within 24 hours of a storm event of 0.25 inches or greater
- Inspection reports to be completed within 24 hours of a site inspection
 - Signature requirements

Maintenance (Corrective Action)

- Initiate work to fix problems immediately after discovery and complete by close of next work day
- If problem is significant and requires new or modified controls, install no later than 7 calendar days from time of discovery, where feasible
- Document in the SWPPP

Section 7 Training

- Training documentation is included as Section 7 of the SWPPP.
 - Personnel responsible for design of stormwater controls
 - Personnel responsible for installation & maintenance of stormwater controls
 - Personnel responsible for inspections
 - Personnel responsible for corrective actions

Section 8 Certification

- Required Certification is included in the SWPPP
 - *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.*
- Also required for all Modifications

Construction Initiation

- Post Notice of Permit Coverage
 - NPDES Permit Tracking # and Contact Name and Number
 - Visible from public road
 - Must include how to contact EPA to report a visible discharge and/or to request a copy of the SWPPP (New in 2017)
- Mark off (flags, tape, other) natural buffer area
- Keep copy of SWPPP easily accessible at the site

Notice of Termination (NOT)

- When earth-disturbing activities are completed and final stabilization is achieved, the site is clean and equipment removed, stormwater controls are removed, and potential pollutant generating activities are removed, may file for a NOT
- Use EPA's electronic eNOI system

Questions?

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EPA website:

<https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents>