



Federal and State Regulation of Stormwater Discharges From Construction Sites

Andrew W. Lord

860.240.6180 | alord@murthalaw.com

Gregory A. Sharp

860.240.6046 | gsharp@murthalaw.com

February 4, 2010

Home Builders Association of Connecticut

- Developer's Council

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The Basics



- The Federal Clean Water Act (“CWA”) makes it unlawful to discharge any pollutant from a point source into navigable waters unless a permit is obtained.

What is a Pollutant?



- Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial, municipal and agricultural waste.
- Conventional Pollutants, includes total suspended solids (“TSS”).
- Priority Pollutants (toxic or hazardous substances).
- Non-Conventional Pollutants (all other substances).

What is a Point Source?



- Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, fissure, container, rolling stock, concentrated animal feeding operation or vessel or floating craft.
- Includes a discharge of on-site stormwater or wastewater via an off-site catch basin through a storm sewer outfall.



What are Navigable Waters?



- CWA defines navigable waters as “waters of the United States.”
- Interpreted to mean virtually all surface waters of the United States, including certain wetlands and intermittent streams.
- Most cases, does not include groundwater.



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What Permit Do I Need?



- National Pollution Discharge Elimination System Permit.
- NPDES permit – individual or general.
- A license to discharge a specified concentration of a pollutant into a receiving water under certain conditions.
- Includes discharges of stormwater.

Who Issues the NPDES Permit?



- CWA is a federal program within the purview of the United States Environmental Protection Agency (“EPA”).
- EPA has delegated its authority to issue NPDES permits in Connecticut to the Connecticut Department of Environmental Protection (“DEP”).



EPA's Establishment of Effluent Limitation Guidelines



- On December 1, 2009, EPA issued a Final Rule: “Effluent Limitation Guidelines and Standards for the Construction and Development Point Source Category” (62 pg. explanation for a two-page rule).
- Became effective on February 1, 2010.
- DEP’s revised General Permit must be consistent with the new federal effluent limitations.

Applicability of Stormwater Permitting Requirement for Construction Industry



- Applies to construction of buildings, including building, developing and general construction (NAICS Code 236).
- Heavy and civil engineering construction, including land subdivision (NAICS Code 237).
- Construction activities disturbing more than one acre of land requires a NPDES permit.
- Includes activities such as clearing, grading and excavation.

Implementation of the New EPA Rule



- All construction sites will be required to comply with the non-numeric criteria by the effective date of February 1, 2010.
- Construction sites that disturb 20 or more acres will be required to meet the non-numeric and numeric criteria within 18 months of the effective date (August 2, 2011).
- Construction sites that disturb 10 acres or more will be required to meet the non-numeric and numeric criteria beginning four years after the effective date (February 1, 2014).
- Acreage limits include non-contiguous land disturbances that take place at the same time and are part of a larger common plan of development or sale.

What Does the New Rule Do?



- Establishes “non-numeric effluent limitations.”
 - Erosion control requirements.
 - Soil stabilization requirements.
 - Dewatering limitations.
 - Pollution prevention measures.
- Establishes a “numeric criterion” for turbidity.

Non-Numeric Criteria (BMPs): Erosion Control Requirements



- Design, install and maintain effective erosion controls to:
 - Control stormwater volume and velocity;
 - Control stormwater discharge to prevent outlet erosion and downstream channel and stream bank erosion;
 - Minimize amount of exposed soil;
 - Minimize disturbance of steep slopes;
 - Minimize sediment discharges;
 - Provide and maintain natural buffers; and
 - Minimize soil compaction and preserve top soil.

Non-Numeric Criteria: Soil Stabilization



- Stabilize disturbed areas immediately upon completion or temporary cessation (greater than 14 calendar days) of construction activities.
- As determined by the permitting authority.
 - In Connecticut permitting authority is DEP.

Non-Numeric Criteria: Dewatering



- Discharges from dewatering activities, including discharges from dewatering of trenches and excavations are prohibited.
- Unless managed by appropriate controls (undefined).

Non-Numeric Criteria: Pollution Prevention Measures



- Design, install and maintain measures to minimize:
 - The discharge of pollutants from vehicle washing and other wash waters (must be treated in a sediment basin or other alternative control);
 - The exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary wastes to precipitation and stormwater; and
 - Discharge of pollutants from spills and leaks and implement spill and leak prevention and response procedures.

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Non-Numeric Criteria: Prohibited Discharges



- Wastewater from washout of concrete, unless managed by an appropriate control;
- Washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
- Fuels, oils and other materials from vehicle and equipment operation and maintenance; and
- Soaps or solvents from vehicle and equipment washing.

Non-Numeric Criteria: Surface Outlets



- When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless unfeasible.

Numeric Criterion: Turbidity



- EPA defines turbidity as “an expression of the optical property that causes light to be scattered and absorbed rather than transmitted with no change in direction of flux level through the sample caused by suspended and colloidal matters such as clay, silt, finely divided organic and inorganic matter and plankton and other microscopic organisms.”
- Layperson defines turbidity as “how cloudy the water looks.”

Numeric Criterion: Turbidity *(continued)*



- Turbidity is measured with a nephelometer and is reported in nephelometric turbidity units (“NTUs”).
- Serves as a proxy for suspended solids such as silt, clay and colloids.

Numeric Criterion: Turbidity *(continued)*



- The new rule requires monitoring consistent with requirements established by the permitting authority
- Each sample must be analyzed in accordance with methods specified by the permitting authority
- Average turbidity of any discharge must not exceed 280 NTUs
- Exemption for certain storm events

What Will the DEP Do?



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DEP General Permit



- Connecticut Department of Environmental Protection (“DEP”) Is Authorized to Issue the Stormwater Permit under both federal and state law.
- Since 1992, DEP Has Issued and Reissued a General Permit for Discharges of Stormwater from Construction Activities.
- Historically, DEP’s General Permit for Stormwater from Construction Sites has gone well beyond the requirements of the newly proposed EPA Rule, except that no numeric criteria had been adopted.

General Permit Scheme



- Commissioner is authorized to issue General Permits for various categories of discharges, including Stormwater. §22a-430b, C.G.S.
- General Permit contains conditions for discharges applicable to all parties who register.
- Each General Permit is effective for a five year period.

DEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters for Construction Activities



- Most recently issued on October 1, 2002.
- Modified on April 18, 2004.
- Reissued on October 1, 2007 (without modification) for one year.
- Reissued on October 1, 2008 (without modification).
- Expires on April 1, 2010 unless modified in accordance with law.

2002 General Permit Applicability



- Applies to construction sites with >1 acre of disturbance.
- Projects with 1-5 acres of disturbance:
 - Requirements apply but no registration with DEP required if activity complies with local land use regulations imposing S&E controls.
- Projects with >5 acres of disturbance:
 - Must register with DEP.
- Projects with >10 acres of disturbance:
 - Must register with DEP and submit Stormwater Pollution Control Plan (“SWPCP”).

2002 General Permit

Key Features



- Self-implementing 30 days after registration.
- Registrant must certify compliance with all terms and conditions of the General Permit.
- The conditions include a statement that the activity does not threaten the continued existence of any species listed pursuant to Section 26-306, C.G.S. as endangered or threatened and does not result in the destruction or adverse modification of habitat designated as essential to such species.

2002 General Permit Implementation Issues



- Approximately 200 registrations each year.
- Level of staffing inadequate for DEP to review projects in detail.
- Sites change from year to year.
- DEP Staff must respond to complaints on a priority basis.
- Additional resources not likely to be authorized by General Assembly.
- No discharge quality data.

Major Changes in General Permit Proposed in Draft of 9/1/08



- New Public Participation Process prior to DEP review.
- Soil & Water Conservation District to review and approve SWPCP prior to submitting registration for coverage under the permit.
- Registrant will pay a fee to the District for the review in addition to \$500 fee to DEP for Registration.

Major Changes in General Permit (continued)



- Mandatory Coastal Consistency Review with Coastal Community Sign-off prior to registration.
- Mandatory Connecticut Endangered Species Determination by DEP Wildlife prior to submitting registration.
- Mandatory Low Impact Development Requirements.
- Mandatory compliance with DEP's Aquifer Protection Regulations.

Proposed General Permit Public Participation Process



- DEP will notify the public, likely through a web-posting, of the availability of the SWPCP for public review and comment.
- Details not worked out yet.
- Will likely extend the time for the effectiveness of the registration to 30 days to 60-90 days.

Proposed General Permit Review of SWPCPs by Districts



- Review of SWPCPs by 5 Soil and Water Conservation Districts for projects with >5 acres of disturbance.
- District review within 30 days.
- Fee for review paid to district based on type of project, acreage or number of lots, e.g. single family subdivision of 1-50 lots will cost \$1,500 - \$9,585 in fees.
- District to perform initial and post-construction inspections.
- District approval required prior to submission of registration to DEP for General Permit coverage.

Proposed General Permit Coastal Consistency Review



- Applicable to Projects in the 34 towns in which the Connecticut Coastal Management Act applies.
- Must obtain sign-off from the town on a DEP form that a coastal site plan has been approved for the project, or that none is necessary.

Proposed General Permit New Endangered Species Process



- Positive determination by DEP Wildlife Division required before submission of registration to Stormwater Program.
- Determination process has not been released to date and is still under review.
- Will likely include detailed guidance on confirmed species locations as well as description of habitats essential for endangered and threatened species.
- Species of Special Concern are not covered in the September, 2008 draft.

Proposed General Permit Low Impact Development



- Post-construction stormwater management to be consistent with DEP Stormwater Quality Manual.
- Structural stormwater control elements to be placed on upland soils, unless specifically approved by Commissioner.
- Goal for Stormwater Run-off:
 - Post-development = pre-development.
 - Remove suspended solids and floatables.
 - 80% removal of annual sediment load.

Proposed General Permit Low Impact Development *(continued)*



- Landscape Plantings must be non-invasive.
- Turf limited to areas of land disturbance specifically required for construction of project.
 - No lawns for the sake of lawns.

Proposed General Permit Aquifer Protection



- SWPCP must consider measures to reduce or mitigate potential impacts to groundwater as well as surface water.
- Goal is to infiltrate stormwater, thereby recharging groundwater, while avoiding pollution of the groundwater.
- The proposed General Permit contains guidance from the 2004 Stormwater Quality Manual about Land Uses with Potential for Higher Pollutant Loads.

Proposed General Permit Registration Requirements



- At least “?” days prior to construction start, submit complete registration to DEP, along with:
 - Coastal Consistency Form, if applicable.
 - Endangered and Threatened Species Determination.
 - Aquifer Protection Compliance Information.
 - Notice from District approving SWPCP, or notice that it was unable to complete the review timely.

Proposed General Permit Inspections



- Maintain rain-gauge on-site.
- For disturbed areas not finally stabilized:
 - At least once a week, and within 24 hours of the end of a storm of 0.5 inch or greater.
 - DEP considering dropping the 0.5 inch threshold and may require inspection after any rain event that generates run-off.

Proposed General Permit Inspections *(continued)*



- For areas stabilized:
 - At least once per month for three months.
- Inspection to be performed by “qualified inspector.”
- Qualified inspector = professional license or certification + 2 years experience, or 5 years experience.

Proposed General Permit Monitoring



- For sites with 1-5 acres of disturbance, monthly monitoring of discharge is required only if registration under the General Permit is required.
- For sites with 5 acres or more of disturbance, monitoring is required monthly.
- Monitoring activities must be documented.
- Sample Method is 40 CFR 136.
- Grab samples from each point source discharge.

Proposed General Permit Water Quality Requirements



- Benchmark of 25 NTU.
- If >26 NTU but <250 NTU
 - Must supplement controls, revise SWPCP and re-sample within 7 days.
- If >250 NTU
 - Must follow steps above, and sample daily until <250 NTU or discharge ceases.

Proposed General Permit Water Quality Requirements

(continued)



- If >250 NTU for two consecutive months
 - Must notify DEP within 24 hours.
- Submit New Stormwater Monitoring Report within 30 days after the end of each month.
- The references to 250 NTU will likely be changed to 280 NTU in view of the federal rule.

Proposed General Permit Schedule for Adoption



- DEP will be modifying the General Permit to bring it into compliance with the Federal Rule.
- DEP will revise the September, 2008 draft and circulate to stakeholders in Spring of 2010.
- DEP will extend the Modified 2002 General Permit for a period long enough to allow adoption of the new General Permit.
- DEP will finalize a draft of the General Permit and schedule a public hearing in Summer/Fall of 2010.
- Goal is to have final version in place in 2011.