

Delaware Department of Transportation
ES2M Inspection Form Guidance_20190110_v3
(For Informational Purposes Only)

CCR GUIDANCE (2019)

DELAWARE GENERAL PERMIT AND THE SEDIMENT & STORMWATER PLAN

The most current version of the Delaware General Permit is located within Title 7 Del. Admin Code 7000/7200/7201 §9.0 and contains the Storm Water Plan (SWP), the Pollution Prevention elements of the Sediment and Stormwater Plan.

Delaware Administrative Code <http://regulations.delaware.gov/AdminCode/>

Title 7 Natural Resources and Environmental Control

- **Delaware Construction General Permit (DE-CGP):** Title 7 Delaware Administrative Code 7000/7200/7201 Regulations Governing the Control of Water Pollution/§9.2
<http://regulations.delaware.gov/AdminCode/title7/7000/7200/7201.shtml#TopOfPage>
- **Delaware Sediment and Stormwater Regulations (DSSR):** Title 7 Del. Admin. Code §5101
<http://regulations.delaware.gov/AdminCode/title7/5000/5101.pdf> **and includes the following:**
 - **Delaware Erosion & Sediment Control Handbook (DE-ESC) 2019**
<http://www.dnrec.delaware.gov/swc/Drainage/Documents/Sediment%20and%20Stormwater%20Program/2019%20February/Regulatory%20Guidance%20Documents%202019/ESC%20Handbook%20-EFF%20FEB%202019.pdf>

Delaware Code <http://delcode.delaware.gov/>

Title 7 Chapter 40 Sediment & Stormwater

Title 7 Chapter 60 Environmental Control

Title 3 Chapter 24 Noxious Weed

Title 3 Chapter 27 Nuisance Plant

Delaware Department of Transportation Standard Construction Specifications Manual 2016 and Standard Construction Details (2014), and all subsequent updates.

(901) Erosion, Sediment and Stormwater Management.

This section reviews the roles and responsibilities of DelDOT and the Contractor for monitoring, implementing and maintaining the approved Sediment and Stormwater Plan, in addition to the Stormwater Management and Pollution Prevention Plan (SWPPP), and practices relating to Erosion and Sediment Control and Stormwater Management applicable to all DelDOT Contracts.

Project Significance.

Projects exceeding an acre of earth-disturbance will be issued an NOI in accordance with Del. Admin. Code Title 7/7201 §9.0 General Permit.

Projects less than one acre but greater than 5000 square feet of earth-disturbance are not covered under an NOI but, are covered under the applicable Delaware Law and Regulations noted in 901.03.1 (2019).

No project is exempt from pollution prevention or erosion and sediment control requirements.

Contractors will provide a valid Blue and/or Gold Card individual as detailed in 901.03.4 (2019) and designate as Erosion & Sediment Control Supervisor.

Erosion & Sediment Control Supervisor (ESCS).

ESCS is required to accompany the CCR on the weekly inspection as part of the 901.03. The ESCS is the responsible party for implementing and maintaining the approved Sediment and Stormwater Plan, this may include the SWPPP.

- Contractors can provide up to two individuals on their project staff as the ESCS but they must possess and maintain a valid Blue or Gold Card. Ensure that you receive a photocopy of the valid certification card at the ES2M Pre-Construction Meeting.
- This is a contractual requirement per the specification and does not require the CCR to document weekly during inspections.

Erosion & Sediment and Stormwater Management Certified Construction Site Reviewer (ES2M CCR).

Ensure you keep open communication and coordination with the Project Resident for field inspections and review report observations with them weekly.

Provide an ES2M Pre-construction Meeting at least 7 c.d. in advance of earth-disturbing activity within the project limits.

Sediment & Stormwater Plan

The Plan shall cover all site activities from the date of initiation of construction activity to the date of the project completion. Pollution prevention measures, in accordance with the Delaware Erosion and Sediment Control Handbook standard and specification for Construction Site Pollution Prevention, shall be incorporated into the Plan for construction activity.

- **Keeping the Plan Current (Sediment & Stormwater Plan)**

In accordance with the DE-General Permit and the DSSR, the Sediment and Stormwater Plan and the SWPPPP must be kept current. All redline revisions and/or design revisions affecting ES2M must be reviewed **prior** to the field inspection. The Project Resident is responsible for updating the ES2M CCR of the redline revision and/or design revision affecting ES2M prior to the field inspection. Log approved redline revisions and/or design revisions affecting ES2M on the “NOTES” sheet and attach a copy to the report whenever possible.

- **A Plan Requires Updating**

- Change in design, construction, operation, or maintenance of erosion & sediment controls or stormwater management measures on site; or
 - The Plan proves to be ineffective in eliminating or significantly minimizing the discharge of pollutants, or otherwise achieving general objectives of controlling pollutants in storm water discharges associated with construction activity; or
 - To address any sources or potential sources of pollution identified in a site inspection per delegated responsibility; or
 - DNREC or DelDOT notification that the Plan does not adequately address the requirements.
 - The approved Plan is not current: indicate on the deficiency sheets and include a photo of the change, whenever possible, and reference the plan sheet that is affected.
 - Failure to implement the approved Plan, to include deviation from the approved Sequence of Construction.
- Document the condition requiring updating, record the applicable “S” or “U” based on the observation at the time of inspection. Provide a photo if whenever possible, update condition or change weekly.
 - Correction due within 7 c.d.

- **Documenting historical non-compliance**

- A listing of the deficiency, the due date & reason for non-compliance
- **Reasons:**
 - Not addressed (no longer relevant)
 - Not addressed (relevant)

- Update Plan (Revision)
- Not addressed

EROSION & SEDIMENT CONTROL BEST MANAGEMENT PRACTICE DEVICES.

General Site Conditions

- Any “U” bmp devices or practices will generate a “Non-Compliance” observation for the overall General Site Conditions.
- General Site Conditions designated as “Non-Compliant” will require enforcement action by the Engineer.

Initial Inspection

- DSSR 6.5.4 requires an initial inspection of perimeter controls by the CCR which include but are not limited to inlet protection, silt fence, check dams, stabilized construction entrances and various elements of Pollution Prevention, prior to earth-disturbance other than to install the bmp controls.
- Document the deficiency as non-compliant with the approved Plan.
- Document deficient or compliant each required bmp control device and provide a photograph for each.
- **Linear Projects:** Initial best management practices (bmp) device controls include but are not limited to perimeter controls (e.g., SF, RSF, CFL), inlet protection, stabilized construction entrances, and/or any bmp devices required per the sequence of construction to be installed prior to clearing and grubbing of the project limits for the proposed phase with exceptions only for disturbance necessary to install those initial bmp devices. If the Contractor has mobilized equipment and staging of materials and supplies (e.g., fueling, material stockpiles, and equipment) then pollution prevention items are added for the initial inspection review. Observe any idle equipment parked throughout the project limits for leaks, drips, and spills as part of the pollution prevention.
- **Bridge Projects:** To include all perimeter controls upland as well as dike/diversion or approved alternate. No excavation of the site shall occur prior to the initial inspection. Pollution prevention is handles in the same manner as Linear Projects, any mobilizing of equipment & staging of materials and supplies will require pollution prevention to be inspected at this time.

Implementation and Maintenance.

- All conditions are at the time of observation for each device, “S” (Satisfactory) or “U” (Unsatisfactory).
 - Satisfactory requirements include but are not limited to, the correct construction and installation of the bmp device, and proper placement of the device in the field.
 - Approved manufactured equivalent is used as determined by the Engineer, then the Contractor must provide the recommendations for use and installation prior to implementing in the field and provide the CCR with those recommendations prior to the field inspection.

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- A redline revision and/or design revision is required to use an alternate prior to use in the field.
- Typical gray areas as discussed.

OBSERVATIONS & ACTIONS

- Document all original deficient and compliant practices with a photograph and record status as “S” or “U” based on the observation at the time of inspection.
 - Deficient bmp devices will be provided a photograph, updated weekly until the repair, replace and/or modification is made.
 - Compliant bmp devices will be listed on the applicable sheet and provided a photograph of original condition, update every 14 c.d. if it remains compliant.
- All correction is due within 7 c.d. except where noted in the Standard Specifications and/or DNREC Regulations.

(902) Pumping Practices

Verify that the dewatering operation is set up in accordance with the approved Sediment & Stormwater Plan and the requirements of the DelDOT Standard Construction Specification 111 (2013) & MOA (attached).

- 111.03.B, D-I (902.03.A-H) are applicable to the inspection.

Observe conditions per the following statements within the specification (111.03.B, D- I) and designate whether it has been complied with, “S” or “U”. Determine if the Contractor is within the maximum limits under the Statewide General Dewatering Permit (**50,000** gallons per day maximum). Exceeding the maximum of 50,000 gallons per day is cited as “U” under 902 plus a written deficiency. Construction is responsible for securing permit information from the Contractor.

Exceeding the **1,000,000** gallons per day without acquiring a well pumping permit will not be grounds to fail the project. DelDOT does not enforce DNREC Well Section regulations. A CCR should notify the Project Resident & ES2M Program Manager when the pumping practice has exceeded the 1,000,000 GPD. DNREC’s applicable section will be sent an email upon occurrence.

Best management practice devices, e.g., sump pit, portable sediment tank, stabilized outfall are observed individually and conditions are satisfactory “S” or unsatisfactory “U”. Ensure each device complies with the approved Standard Construction Detail and Specification. All conditions are at the time of observations. Repair, replace or modify to be corrected within 7 c.d. **(Refer to 906 for required Implementing and Maintaining of applicable devices.)**

- Functioning in place prior to beginning excavation, except for installation of the Sump Pit.
- BMP control devices include but are not limited to the stream diversion, stabilized outfall, stilling well, and instantaneous/totalizing flow meter, approved filtering device (PST or Dewatering bag). Sump Pit installation shall follow 111.03.I (902.03.H).

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Conditions of the dewatering operation are unsatisfactory should one bmp control device be observed as unsatisfactory. Record observed deficiencies and include a supporting photograph as you would any other deficiency.

DNREC has determined that a sediment or turbid discharge is a valid reason to cease and desist a dewatering operation. The Area Engineer is to be notified that they must stop the dewatering operation and provide additional approved measures for reducing the discharge, per DNREC memorandum dated 24 March 2009 – See attached. Additional measures may include but are not limited to the use of Best Available Technology (B.A.T.) prior to discharge. (Attached)

(909500) Stream Diversion. This is a lump sum payment item not a device. Each related device within the Stream Diversion has an applicable observation method.

(903) Pollution Prevention

A. Waste Management Practices.

(1) Waste Collection. The contractor is required on a daily basis to monitor and clean up all trash and debris including solid waste, i.e. excess asphalt, construction debris, litter etc.

- Waste Receptacle(s) must be in a designated area within the LOC.
 - Until the Specification changes, these areas must be “clearly marked”.
 - DNREC (1/10/2019) has determined that there may be multiple designated areas throughout the project limits for waste (recyclable) materials however, they must be maintained and provided perimeter controls, not receive substantial runoff and do not drain to a waterbody, and meet all other requirements for Non-Hazardous & Hazardous Waste.
 - Recyclable materials includes but is not limited to millings, pipe, concrete rubble (not crushed), rebar, etc.
 - Construction and domestic waste materials are required to be placed in a lidded container. This may include but is not limited to electrical cuttings, paper, Styrofoam, mixed debris.
 - Woody debris from clearing and grubbing is permitted to be neatly stockpiled in a centralized location for removal or recycle.
 - Mixed waste materials will be placed in a container for removal every 20 working days.
 - DNREC (1/10/2019) has determined that the Project Resident (*contact the ESL*) must approve the designated areas and mark these areas on the Plans with associated bmp controls as a redline revision.
- Waste Receptacle Size. The waste receptacle must be of sufficient size to handle the trash being placed in it. A plastic bag is not a receptacle.

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- Observe whether the receptacle is of sufficient size to contain the waste collected, and has a cover available.
- Cover is to be placed in a weather event producing precipitation, and at the end of each working day.
- Waste Receptacles shall be located in an area that does not drain to a waterbody or stormwater conveyance, or within 50 feet of a waterbody.
- Waste Receptacles shall be emptied every 20 working days or when they reach capacity.

(2) Sanitary Facilities. Observe and report:

- Sanitary facilities located within the LOC shall be secured to prevent knock over and well-maintained; and
- Shall be located in an area that does not drain to a waterbody or stormwater conveyance, and/or within 50 feet of a waterbody.

B. Equipment and Vehicle Fueling and/or Maintenance Practices. Observe and report the following:

- On-site fueling operations and/or maintenance
 - Fuel tanks shall be clearly marked with placards or signage (DSSR) indicating the hazardous substance contained within.
 - Bridge Projects: Fuel tanks must be secondary contained or located away from downstream drainage facilities and watercourses (e.g., ditches, swales, streams, inlets).
 - Areas where equipment and vehicles will be repaired, maintained, fueled or parked must be protected from stormwater run-on and run-off.
 - Use barriers such as berms to prevent stormwater run-on and run-off, and contain spills.
 - Equipment and vehicles shall be protected from stormwater run-on and run-off, and to contain spills have drip pans or absorbent pads at all times.
 - Equipment shall be inspected for leaks on a daily basis.
 - Provide spill kit and clean up material in these areas (physically observe the kit and location). Absorbent spill clean-up materials and spill kits must be available in fueling areas and on fuel trucks.
 - Properly dispose of all spent fluids, oil, lubricants and spill clean-up materials.
 - Immediately clean up leaks, spills and/or other sources of water pollutants from vehicles & equipment. Remove the source of the leak or spill if it cannot be repaired in place. Example: Check surface areas within the LOC and report any active spills to the PS.
 - **Correction is due immediately.**

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C. Dewatering Equipment. Observe and report on the following:

- **Secondary Containment.** Pumps and/or various types of stationary equipment located within the ordinary high water limits and/or 50 LF minimum of the water body shall have secondary containment provided. Self-contained systems are permitted outside the actual influence of waters of the US. Have the contractor provide that information if this is the case.
 - Aboveground Storage Tanks must be secondary contained or located away from downstream drainage facilities and watercourses (e.g., ditches, swales, streams, inlets)
- Where at all possible, the contractor shall remove fuel & pumps from the influence of waters of the State at the end of each work day. Check only to ensure that the regulation is complied with if you are there at the end of the work day or prior to active work during the day.
- **Correction is due immediately.**

D. Designated Washout Areas. Observe and report on the following:

- **Concrete Washout Facilities.** Designated and clearly marked areas. Standard Detail E-1/Concrete washout areas. There are no specific requirements for the signage, only that it be clear and visible.
 - The effluent is the pollutant. Washout from concrete trucks shall be disposed of in a temporary pit for hardening and proper disposal. Hardened concrete is not a deficiency for concrete washout. It is construction debris.
 - Repair and/or replace the facility if it is $\geq 75\%$ of capacity.
 - Washout facilities must be located away from downstream drainage facilities and watercourses (e.g., ditches, swales, streams, inlets, wetlands)
 - Minimum dimensions as per Standard Construction Detail E-1. Liner must be free of tears or holes and placed over smooth surfaces to prevent puncture.
 - It is recommended a cover be deployed during a weather event producing precipitation.
 - These types of facilities are not limited to concrete but include control of paints, solvents, stucco, etc. and are to have their own separate washout facilities designated and clearly marked. Observe and report on any designated and clearly marked areas for applicable materials. The device and/or constructed BMP require Engineer approval prior to use.
 - **Correction is due immediately.**

E. Storage and Staging Areas.

- Observe and report on the following:
 - All potential pollutants (paints, solvents, pesticides, fuels, oils, and other hazardous materials) are under cover or secured in areas with secondary containment when not in use. Examples: Storage trailers, drums on pallets and covered with a tarp, topsoil stockpiles stabilized and/or covered with perimeter controls, etc.

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- Items left unattended and out in the open unused will be observed as “U” unsatisfactory.
- Fuel or other hazardous substances stored in Aboveground Storage Tanks (AST) \geq 250 gallons require secondary containment systems. A double-walled tank meets the secondary containment requirement. The contractor shall provide documentation that meets the requirement for double-walled tank prior to use on site. Example: Placement of tanks exceeding 250 gallons is covered under Delaware Code. Observe and report only if secondary containment has not been provided and if, the spill kit is available at the fueling area. AST size and conformity is the responsibility of the contractor to comply with any Federal or State Laws and Regulations.
 - SPCC applies to operations that could reasonably be expected to discharge oil to navigable waters of the U. S. or adjoining shorelines, such as lakes, rivers, and streams. (40 CFR part 110 Discharge of Oil Regulation and 40 CFR part 112 Oil Pollution Prevention Regulation).
 - Tanks \geq 250 gallons require secondary containment regardless of location unless the tank is self-contained and manufacturer specifications are provided prior to use.
 - Tanks that could be reasonably expected to discharge oil in an area draining to a waterbody require secondary containment.
 - No piping, pumping or other equipment leaking contaminants that could contact storm water;
 - Will be inspected weekly by the CCR; and
 - Have perimeter controls (secondary containment) to prevent stormwater run-on and run-off.
 - Precipitation collected in secondary containment structures must be properly managed;
 - A spill containment and clean-up kit must be available for personnel dispensing product.
 - Areas are designated for activities such as fueling, mixing, washing, etc.
 - Areas are maintained.
 - **Correction is due immediately. Clean up spills, leaks, and/or drips immediately.**

F. Equipment/Vehicle Washing.

- Observe and report on the following:
 - Designated and clearly marked areas.
 - Areas are a minimum of 50 feet from storm drains and/or waterways.

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- No detergent use.
- Discharge water is routed to sanitary systems whenever possible.
- **Correction is due immediately.**

(904) Set aside for later use.

(905) Sediment Trapping Practices.

- **Silt Fence** (905001, 905002). Includes all perimeter controls to include Silt Fence (SF), Reinforced Silt Fence (RSF), Super Silt Fence (SSF) installed & maintained as indicated on the Plans and Standard Construction Details, Silt Fence.
 - Construction/Installation in accordance with 905.03.A.1 & 2.
 - Standard Detail E-2
 - Silt Fence, Alternate – See Detail E-2A
 - To be addressed at the ES2M PCM
 - SSF (future Standard Detail), use current DNREC Standard Detail
 - Maintenance & Removal in accordance with 905.03.A.3 & 4.
- **Sediment Trap** (905003). Includes construction & maintenance as indicated on the Plans and Standard Construction Detail, Sediment Trap.
 - Construction/Installation in accordance with 905.03.B.1.
 - Standard Detail E-3
 - Maintenance & Removal in accordance with 905.03.B.2 & 3.
- **Inlet Protection** (905004, 905005, 905006). Includes all drainage inlet protection devices to include Inlet Protection, Drainage Inlet; Inlet Protection, at Grade; Inlet Protection, Culvert Inlet. Alternate designs may be submitted to the Stormwater Engineer for approval prior to use.
 - Construction/Installation in accordance with 905.03.C.1.
 - Standard Detail E-4 Drainage Inlet Protection & Curb Inlet Protection
 - Standard Detail E-5 Culvert Inlet Protection
 - Any usage of CFL will be per Manufacturer’s guidelines for use and installation
 - Manufacturer information required prior to use
 - Maintenance & Removal in accordance with 905.03.C.2 & 3.

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- *Gray Area: An inlet or outlet structure under construction and is ≥ 12 " above grade on all sides and not within a sump area, then the necessity of installation is not required per the SWE until grade is brought to ≤ 12 ".*

(906) Dewatering Practices.

- **Portable Sediment Tank** (906001). Includes construction & maintenance as indicated on the Plans and Standard Construction Detail, Portable Sediment Tank. Alternate designs must be submitted to the Stormwater Engineer for approval prior to use.
 - Construction/Installation in accordance with 906.03.A.1.
 - Standard Detail E-6
 - Maintenance & Removal in accordance with 906.03.A.2 & 3.
- **Dewatering Bag** (906002). Dewatering Bags are sized according to the pump size. Ensure the proper size bag is installed and that it is maintained to provide sediment free discharge.
 - Construction/Installation in accordance with 906.03.B.1.
 - Manufacturer's recommendations & guidelines for maximum performance.
 - Maintenance & Removal in accordance with 906.03.B.2 & 3.
- **Sump Pit** (906003)
 - Construction/Installation in accordance with 906.03.C.1.
 - Standard Detail E-7
 - Maintenance & Removal in accordance with 906.03.C.2 & 3.
 - The dewatering system is a sequence of devices and should be judged for maintenance by assessing the discharge. Bottle Test: At the beginning of your inspection, use a bottle to take a sample at the point of discharge then set aside until completion of the inspection. At the end of your inspection, assess the quantity of sediment settled out and whether or not maintenance to the SYSTEM is required to minimize the sediment discharge. *IF THE SYSTEM IS INEFFECTIVE or ADDITIONAL PROBLEMS WITH THE SYSTEM ARE OCCURRING THAT AFFECT THE DISCHARGE, CONTACT THE EROSION & SEDIMENT LIAISON (ESL).*
- **Skimmer Dewatering Device** (906004)
 - Construction/Installation in accordance with 906.03.D.1.
 - Standard Detail E-8
 - Maintenance & Removal in accordance with 906.03D.2 & 3.

(907) Water Control Practices.

- **Stone Check Dam** (907011). Alternate materials, i.e. Compost Filter Log (CFL) may be submitted to the Stormwater Engineer or ESL for approval prior to use.
 - Construction/Installation in accordance with 907.03.A.1.
 - Standard Detail E-9
 - (CFL) Shall be installed per manufacturer's guidelines for use & installation.
 - Maintenance & Removal in accordance with 907.03.A.2 & 3.
 - (CFL) shall be maintained according to manufacturer's guidelines.
- **Temporary Slope Drain** [(12") 907012, (18") 907013, (21") 907014, (24") 907015, (30") 907016] Diameter of pipes range from 12" up to 30". Ensure that the correct sized pipe is installed in accordance with the Plans, Details and Specifications.
 - Construction/Installation in accordance with 907.03.B.1.
 - Standard Detail E-10
 - Maintenance & Removal in accordance with 907.03.A.2 & 3.
- **Riprap Energy Dissipater**
 - Constructed per the Standard Detail E-20.
 - Maintain as a function of eliminating erosion and scour.
- **Stone Outlet**
 - Constructed per the Standard Detail E-21.
 - Maintain as a function of eliminating erosion and scour.

(908) Soil Stabilization Practices. *Observations are focused on no bare ground and/or no erosion occurring.*

- **Interim and Final Stabilization**
 - Interim Stabilization is temporary stabilization of disturbed soil. Different methods including permanent measures can be used depending on the length time until the area is redisturbed. Anything phased to be disturbed exceeding 6 months will be permanently seeded and mulched. Temporary methods include seed, mulch and/or soil stabilizer if approved.
 - Observe the condition of the mulch cover only. Is the soil surface sufficiently covered, no bare ground and/or no erosion occurrence.
 - Final Stabilization occurs when complete permanent vegetation is installed, maintained and meets the level for acceptance (3" height and 70% uniform density over all seeded areas).

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- Observe the condition of the mulch cover only. Is the soil surface sufficiently covered, no bare ground and/or no erosion occurrence.
- **Tracking**
 - All areas including slopes $\geq 4:1$ to prevent gully and sheet erosion.
 - Vertical tracking of slopes $\geq 4:1$, prior to seeding. The Engineer may approve horizontal tracking as sufficient when safety or accessibility is an issue.
 - Reference treatments DE-ESC Handbook 3.4.2
- **Temporary Stockpiled Materials**
 - Must be clearly marked on the Sediment and Stormwater Plan per DSSR (DE-ESC Handbook 3.7.3)
 - Adding this to the ES2M Pre-Construction Meeting Agenda. (Attached)
 - ESL will identify and redline the plan appropriately.
 - Shall be placed 50 feet minimum distance from streams, wetlands and open channels within the LOC, not to exceed a vertical height of 20' or the local governing height restriction, tracked, seeded and mulched as per incremental and final stabilization.
 - Stockpiles within the operational ROW may exceed 20' height requirement.
 - Soil Stockpiles shall conform to DE-ESC Handbook (DSSR) 3.7.3
- **Permanent Stabilization (908014, 908015, 908016, 908019).**
 - Swales (Permanent & Temporary) receive ECB in the flow line.
 - Hydraulic Mulches shall be placed as per manufacturer's guidelines for use and installation with no bare ground and/or no erosion occurrence. The soil surface shall be sufficiently covered.
 - Straw Mulch shall be placed in accordance with the DE-ESC Handbook 3.4.5
 - ECB: installed per the Manufacturer's guidelines for use and installation, or the Standard Detail E-12 if Manufacturer information is not provided.
 - TRM 1 & 2 installed per the Manufacturer's guidelines for use and installation, or the Standard Detail E-13 if Manufacturer information is not provided.
 - Discuss active stabilization at Pre-Inspection and future schedules during the inspection review.

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- **Temporary Seeding & Stabilization (908017).**
 - 7 calendar days to temporary stabilize with seed & mulch upon complete installation of Sediment controls (example: ST, SB, Dike/Swale, Swale, etc.)
 - 14 calendar days to temporary stabilize (*seed & mulch*) upon cessation of earth disturbing activities (active grading or excavation). The Department will permit alternative methods of stabilizing the soil without seed and/or mulch with Stormwater Engineer approval (i.e. soil binders or straw mulch no seed).
 - Any product used for temporary stabilization must be submitted to the Stormwater Engineer for approval **prior** to use in the field.
 - Areas stabilized with soil stabilizers will be re-evaluated at **28** calendar days. The Contractor may reapply and/or install temporary seed & mulch.
 - No action will result in a written deficiency. Try to discuss prior to reaching this point.
 - Mulch is incidental to temporary stabilization however, it must comply with manufacturer guidelines for use and installation, no bare ground and/or erosion occurrence.
 - Stockpiles are to be stabilized as the pile progresses in accordance with interim stabilization and DE-ESC Handbook 3.7.3.
- **Stabilized Construction Entrances (908009).** These require inspection on a daily basis by DelDOT Project Staff. Review each point of egress weekly.
 - Construction/Installation in accordance with 908.03.E.1.
 - Standard Detail E-14
 - Maintenance & Removal in accordance with 908.03.E.2 & 3.

(909) Waterway Construction Practices.

- **Sandbag Dike/Diversion.** This item is usually included within the Stream Diversion item (909005) and Standard Plan.
 - This structure is to be inspected and is included as a portion of the initial controls for the project. Initial inspection is required prior to work above or below Ordinary High Water (OHW). The DelDOT Project Resident can administer the approval of the perimeter control and the commencement of pumping operations to dewater the work area.
 - Failure to implement the applicable device or structure is a deficiency unless a revision has been approved. Revisions and/or alternate structures must be provided to the ES2M CCR prior to the field inspection and be implemented as approved.
 - Construction/Installation in accordance with 909.03. A & 909.03.B.1.

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- Standard Detail E-15 & E-16
 - Maintenance & Removal in accordance with 909.03.2 & 3.
 - Thoroughly inspect the upstream & downstream dike/diversion and/or applicable revision each week. Ensure the weir is placed appropriately and elevation.
- **Geotextile Lined Channel Diversion (909003).** Ensure that the channel mirrors the existing stream conditions & grades.
 - Construction/Installation in accordance with 909.03.C.1
 - Standard Detail E-17
 - Maintenance & Removal in accordance with 909.03.C.2 & 3.
- **Turbidity Curtain, Floating (909004).** Manufacturer's drawings & technical specifications are to be submitted to the Engineer prior to installation. Ensure these are provided as part of the item.
 - Construction/Installation in accordance with 909.03.D.1
 - Standard Detail E-18
 - Maintenance & Removal in accordance with 909.03.D.2 & 3.
 - *The turbidity curtain is essentially a perimeter control. Repair must be immediately upon discovery if work activity is in-stream or parallel to the stream. Contact ESL for direction to the contractor.*
- **Stilling Well (909006).** Inspect and ensure that the intake of the pump is floating and/or surfaces are lined with riprap. Alternate method must be approved by the Stormwater Engineer prior to use in the field.
 - Construction/Installation in accordance with 909.03.F.1
 - Standard Detail E-19
 - Maintenance & Removal in accordance with 909.03.F.2 & 3.
- **Stabilized Outfall (Stream Diversion 909005).** Inspect and ensure that the discharge area of a pipe and/or hose is provided a non-erosive surface, i.e. riprap, geotextile, plastic sheeting, etc.
 - Construction/Installation in accordance with the approved plan.
 - Maintenance & Removal in accordance with the approved plan.
- **Stream Diversion (909500)**
 - Initial inspection of bridge projects will include all applicable items prior to ANY excavation of the work area. To include but not limited to

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(910) Stormwater Facility Construction.

- Document and submit weekly and/or daily progress of Stormwater BMP facility construction with the agreed IDRs and photographs. All numbered Stormwater BMP facilities are to be inspected monthly upon final permanent stabilization and/or final conversion.
 - Biofiltration Swales/Vegetated Channels (BFS)
 - Bioretention Facility
 - Infiltration Trench
 - SWM Basins (Infiltration, Wet and Dry-Extended Detention)
 - Permeable Pavement
- Perform critical structure inspections as per the specific requirements of each Construction Checklist and the Standard Specification.
- **Complete the applicable Construction Checklist and submit to the Stormwater Engineer (Vince Davis) and the NPDES Engineer (Sara Esposito) prior to the semi-final inspection.**

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NOTES

- **1. PRE-INSPECTION MEETING**
 - A. Document the Phase, Stage or Sequence at the time of observation. The Project Resident/Inspector should be capable of providing you with the current work scheduled at the time of inspection.
 - B. Document any redline or revisions presented prior to the inspection. Any change to the approved Sediment & Stormwater Plan must be approved prior to initiation in the field.
 - C. Review the previous report and if any corrective action has been taken to comply.
 - D. Document any Dewatering occurring on site and the bmp devices applicable to the work. If a permit is provided, record the number.
 - E. BMP Construction: complete as applicable to the project.
 - F. (908) Stabilization. Any project prior to 12/28/2018 will still ask to see a copy of the seed tag and assess mulching including paper mulch. After 12/28/2018, you no longer are required to ask for the seed tag and mulching remains incidental to seeding however, NO PAPER MULCH is permitted. “S” depends on compliance with the mulching to ensure adequate soil surface coverage with no erosion and/or bare ground. Request product information and manufacturer prior to the field inspection. This applies to Rolled Erosion Control Blankets and Turf Reinforced Matting also. Note locations for this inspection only.
- **2. FIELD INSPECTION DISCUSSIONS.** During the field inspection document issues and discussions that are relevant (e.g., field changes, bmp devices that do not work, agreed processes, etc.).
- **3. POST INSPECTION MEETING.** Review the report with the DelDOT representative & Contractor ESCS if possible. Leave a copy of the cover sheet with them. The full body of the report is due within 24 hours of the end of the inspection.

CONDITIONS

Compliant Observations

- Original compliant observations will be documented with a photograph of condition and listed status as “S”, observation & action statements include applicable statements that indicate compliance.
- If the bmp device remains compliant and functional the following week, the CCR will list on the compliant bmp sheet. A photo is required every 14 c.d.

Current & Previous Deficiencies.

- Current deficiencies will be supported by an original photo of the condition as observed. Select the appropriate BMP Device (i.e. inlet protection), Observation (i.e. not installed and maintained as per -Plan), Action (i.e. install and maintain as per Plan), and other additional relevant information (i.e. DI-95).
- Previous deficiencies will be supported by both original condition photo and the updated current inspection photo of the observation.

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- Record condition as observed at the time of inspection, “S” or “U”.
- All deficiency correction dates will be seven (7) calendar days from original observation with the exception of temporary stabilization.
- Hazardous, toxic and/or petroleum based spills, leaks and/or dripping equipment and/or a visible sheen on the water surface will require immediate clean-up action. Reportable quantity to DNREC is 25 gallons. Call DNREC (800) 662-8802 immediately if a visible sheen is detected on a surface water.



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

SHAILEN P. BHATT
SECRETARY

Memorandum of Agreement (MOA)
Between the
Delaware Department of Natural Resources and Environmental Control (DNREC)
And
The Delaware Department of Transportation (DeIDOT)
Pertaining to
Minor Dewatering Activities Associated with DeIDOT Construction
and Maintenance Projects

This memorandum constitutes an agreement, hereinafter designated as "MOA", between the **Department of Natural Resources & Environmental Control (DNREC)** and the **Department of Transportation (DeIDOT)** of the State of Delaware.

WHEREAS, Title 7 of the Delaware Code, Chapter 60, §6003 (a)(3) authorizes DNREC to regulate and control via permit the withdrawal of groundwater or surface water or both in the State of Delaware; and

WHEREAS, the purpose of issuing permits for groundwater and surface water withdrawals is to regulate and protect the supply of groundwater and surface water for human and agricultural uses and consumption; and

WHEREAS, the type and amount of ground water and surface water pumped on DeIDOT projects typically does not impact the quality or quantity of agricultural or potable water supplies; and

WHEREAS, DNREC requires anyone wishing to pump groundwater or surface water from construction sites to first acquire a dewatering permit through their Water Supply Section prior to starting any pumping operation, and

WHEREAS, it is in the State's best interest to minimize the time and cost of processing dewatering permits for minor withdrawals of groundwater or surface water; and

WHEREAS, DelDOT Standard Specifications provide the State of Delaware ample authority to control the activities of State Contractors engaged in minor dewatering activities on DelDOT projects; and

WHEREAS, the parties have indicated their willingness to enter into a mutual agreement to establish a blanket Statewide General Permit for Minor Dewatering Activities.

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties to this **MOA** do hereby agree as follows:

Scope

This **MOA** constitutes a Statewide General Permit for Minor Dewatering Activities necessary to facilitate and complete DelDOT construction and maintenance projects subject to the terms and conditions set forth in Exhibit 'A' attached hereto and made a part of this **MOA**. The work contemplated under this Statewide General Permit for Minor Dewatering Activities includes, but is not limited to:

1. Dewatering shallow localized depressions, such as mud puddles in the work area;
2. Removal of ponded rain water from excavations such as the pavement box;
3. Drawdown of surface water levels for the conversion of temporary sediment basins to permanent stormwater management ponds;
4. Drawdown of surface water levels for the maintenance clean out of permanent stormwater management ponds;
5. Dewatering of trenches and temporary cofferdams provided the dewatering can be accomplished using DelDOT Standard Details in lieu of well points;
6. By-pass pumping of surface water at rates exceeding 50,000 gallons per day to facilitate in-stream work for bridge and culvert replacements provided no water is withdrawn for consumptive use and all water is returned to its natural course immediately downstream of the work area.

DelDOT will:

1. Implement the requirements of the specification on dewatering, attached hereto as **Exhibit 'A'**,
2. Seek DNREC approval prior to updating, modifying or amending the requirements established in **Exhibit 'A'**.
3. Monitor construction and maintenance activities for compliance with the requirements of **Exhibit 'A'**.
4. Notify DNREC at the start of each DelDOT project of the approximate location and duration of all anticipated dewatering activities permitted under this MOA.

DNREC will:

1. Provide advice and guidance to DelDOT when requested on matters pertinent to dewatering activities on DelDOT projects.
2. Advise DelDOT of code or regulatory changes that would necessitate modifications to the requirements of **Exhibit 'A'**.

Exclusions

Any means or method of groundwater withdrawal in excess of 50,000 gallons per day is specifically excluded from this **MOA** and shall be first permitted through DNREC prior to commencement of withdrawal.

Complete Agreement

This written Agreement and its Exhibits constitutes the entire agreement of the parties and supersedes all prior communications, understandings and agreements relating to the subject matter hereof, whether oral or written.

Amendments and Modifications

Any changes to this **MOA** shall be in writing by mutual agreement of both parties.


Termination

Either party may terminate this **MOA** upon 60 days written notice to the other party of its intention to terminate whereupon all active dewatering activities shall be brought to closure and completed within 60 calendar days after receipt of written notice of termination from the other party. All new and subsequent withdrawal of groundwater, surface water, or both shall be subject to the governing rules in effect at the time of termination.

IN WITNESS WHEREOF, the said parties have executed this MOA effective upon the last date signed.

FOR THE DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL

Recommended by:



Kathleen Stiller
Director, Division of Water Management

6/11/13

Date

Approved by:




Collin O'Mara
Secretary

6/11/13

Date

FOR THE DEPARTMENT OF TRANSPORTATION

Recommended by:




Natalie Barnhart, P.E.
Chief Engineer

3/7/13

Date

Approved by:



Shailen Bhatt
Secretary

3/15/13

Date

Approved as to Form:

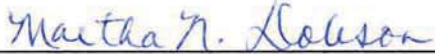


Frederick H. Schrank, Esq.
Deputy Attorney General

3/5/13

Date

Attest
Witnessed by:



Marti Dobson
Director of Technology & Support Services
Delaware Dept of Transportation

3/19/13

Date

EXHIBIT 'A'

SECTION 111 – DEWATERING OPERATIONS (3/xx/2013)

Delete Section 111 in its entirety and replace with Section 111 as follows:

111.01 Description

Furnish necessary equipment, materials, and labor to dewater locations shown on the Plans, and as directed by the Engineer.

- A. *Statewide General Permit for Minor Dewatering Activities.* Comply with the Statewide General Permit issued to the Department by DNREC via interagency Memorandum of Agreement. Covered work includes the following activities:
 1. *Dewatering.* Dewater the work area in accordance with this specification at rates less than 50,000 gallons per day.
 2. *Stream By-pass Pumping.* By-pass surface water to facilitate in-stream work for bridge and culvert replacements. By-pass pumping at rates exceeding 50,000 gallons per day are permitted provided no water is withdrawn for consumptive use and all water is returned to its natural course immediately downstream of the work area.
- B. *Permits Required.* Obtain a separate dewatering permit from DNREC when groundwater or surface water withdrawal rates in excess of 50,000 gallons per day are necessary.
 1. *Permit Acquisition.* Obtain all necessary permits for dewatering and disposal of pumped water required to construct and complete the Work from DNREC, Division of Water, Water Supply Section, unless covered in the Statewide General Permit for Minor Dewatering Activities.
 2. *Permit Costs.* Pay all costs associated with the acquisition of separate dewatering permits from DNREC.
 3. *Permit Acquisition Time.* Dewatering permits for rates exceeding 1,000,000 gallons per day require public notice and possibly a public hearing before DNREC will issue a permit. Ensure that sufficient permit acquisition time is included in the project schedule to obtain the permit. Time extensions will not be granted for failure to account for this time in the project schedule.
 4. *Other Permits.* State and Federal permits are required for any entry into streams or wetlands. Environmental Requirements are more fully described in the Project Environmental Statement.

The Statewide General Permit for Minor Dewatering Activities does not constitute approval, exemption or waiver from any other law, rule or regulation that may apply to the work shown in the Plans or the activities necessary to complete the work. (See Specification Section 107.02, Permits, Licenses and Taxes.)

EXHIBIT 'A'

5. *Licensing Requirements.* Meet any and all DNREC licensing requirements for the installation or operation of the dewatering equipment, or employ the services of properly licensed subcontractors such as a well driller when an individual dewatering permit is required.

111.02 Material

Provide Materials as necessary and required.

111.03 Construction

- A. *Submit Approved Permits.* Submit copies of all permit approvals to the Engineer. Dewatering operation cannot begin until the necessary dewatering permit is submitted to the Engineer.
- B. *Dewatering Equipment.* Provide sufficient equipment and back-up or replacement equipment necessary to ensure the continuous dewatering of the work area. Instantaneous and totalizing flow meters, accurate to within +/- 5%, are required on all dewatering equipment.
- C. *Required Notifications.* Notify the DNREC Water Supply Section at (302) 739-9945, 48 hours prior to starting any dewatering operations.

Notify DNREC Wetlands and Subaqueous Lands Section at 302-739-9943, 48 hours prior to starting any dewatering adjacent to wetlands or if discharge water is proposed to be directed to any wetlands.

- D. *Dewatering Operation.* Do not allow surface and ground water to rise around the proposed work. Continue dewatering until the work has been brought to finished lines and grades, and accepted by the Engineer. None of the proposed work shown on the Plans will be laid in water, unless otherwise indicated on the Plans or directed by the Engineer.
- E. *Protection of Work Area.* Install clean water diversions outside excavation limits to prevent the flow of surface water from undisturbed areas into open excavations using any combination of berms, pipes, dikes, pumps, etc. in order to establish a clean water diversion. Comply with applicable sediment control measures.
- F. *Protect Adjacent Property.* Dispose of pumped water into a suitable conveyance system without flooding or damage to adjacent property, buildings, structures, utilities, and other work. Protect adjacent structures and property from any damage that may occur as a result of settlement or other effects related to the removal of ground water and lowering of the water table. Do not drain dewatering discharge into work completed or under construction without prior consent of the Engineer. Dispose of Water in such a manner as not to be a menace to the Public Health. Discharging to the sanitary sewer system is not permitted.
- G. *Protect Adjacent Waterbodies.* Discharge of saline water into a fresh water system or discharge fresh water into a saline water system is prohibited. Dewatering operations for the Project cannot cause the inadvertent drawdown or dewatering of wetlands or other surface water bodies.

EXHIBIT 'A'

- H. *Dewatering Discharge.* Ensure all discharges are directed to sediment trapping or filtering devices such as a dewatering bag, dewatering basin, portable sediment tank, sediment trap or sediment basin prior to release into ditches, storm drain systems, streams or surface water bodies of any type.

- I. *Dewatering of Temporary Cofferdams for Bridge Construction.* Upon completion of driving of temporary sheet pile for in-stream work, or erection of a temporary dike to create a temporary cofferdam, leave the sediment-laden water within the cofferdam undisturbed for a minimum of 12-hours to allow settling of suspended soil particles. Remove water from temporary cofferdams by skimming it off the surface. Immerse intake no more than 6" (150 mm) below the water surface. Once the water level has been pumped down, accomplish additional dewatering using a sump pit constructed in conformance with DelDOT Standard Details. Any deviation from Standard Details requires prior approval and may require an individual dewatering permit from DNREC.

- J. *Well Impacts.* As required by Title 7, Del.C., §6031 and §6037, take whatever steps are necessary to provide continuous uninterrupted water service to any affected public or private potable water supplies or wells within the project area if adversely affected by the dewatering operations associated with this project.

111.04 Measurement and Basis of Payment

Dewatering Operations will not be separately measured or paid. All Costs are incidental to the associated work items.



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

May 11, 2018

Mr. Jason A. Sunde
Environmental Program Manager
Solid and Hazardous Waste Management Section
89 Kings Highway
Dover, Delaware 19901

Dear Mr. Sunde,

SUBJECT: Expiration of Beneficial Use Determination #34/051018B; Delaware Department of Transportation BUD #34, File Code: 03.A

We have received your letter of May 9, 2018, informing us that a Beneficial Use Determination (BUD) approval and permit will no longer be required if DelDOT's uses of asphalt millings are conducted in accordance with the best management practices (BMPs) included in your letter. DelDOT's current activities comply with those BMPs and we agree to continue this compliance. If DelDOT's asphalt millings activities are modified from those described in your letter, we will immediately contact the Solid and Hazardous Waste Management Section for a re-evaluation of this permitting decision.

Sincerely,

Robert B. McCleary
Chief Engineer

RM/DN/bmc
Enclosure

cc: Mark Alexander, Director, Maintenance and Operations, DOTS
David Nicol, Assistant Director, Engineering Support, DOTS
Javier Torrijos, Assistant Director, Construction, DOTS
Jennifer Pinkerton, Chief Materials & Research Engineer, DOTS



STATE OF DELAWARE

89 KINGS HIGHWAY
DOVER, DELAWARE 19901

TELEPHONE: (302) 739-9403
FAX: (302) 739-5060

DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
DIVISION OF WASTE AND HAZARDOUS SUBSTANCES
SOLID AND HAZARDOUS WASTE MANAGEMENT SECTION

May 9, 2018



Mr. Robert McCleary, Chief Engineer
Delaware Department of Transportation
P.O. Box 778
Dover, DE 19901

Subject: Expiration of Beneficial Use Determination #34/051018B
Reference: Delaware Department of Transportation BUD #34, File Code: 03.A

Dear Mr. McCleary:

The Delaware Department of Transportation (DelDOT) is currently approved to beneficially use asphalt millings (bituminous concrete) derived from roadway projects in recycled asphalt pavement, bituminous surface treatments, embankment fill, edge drop-off repair, pothole repair, road base course, and sidewalk base course via Beneficial Use Determination (BUD) Approval #34/051018B issued by the Department of Natural Resources and Environmental Control's Solid and Hazardous Waste Management Section (SHWMS). The SHWMS has determined that activities approved in DelDOT's BUD no longer require an approval or permit if they are conducted in accordance with best management practices (BMPs). The best management practices the SHWMS requires are the same ones identified in DelDOT's BUD Approval, which are identified below:

1. **BMPs for Handling and Storage of Waste:** Best management practices shall be used to minimize any fugitive dust, leachate, and/or runoff that may result from the handling and storage of asphalt millings. These best management practices include but are not limited to:
 - a. Employing standard erosion and sediment control devices to ensure stormwater runoff is managed properly.
 - b. Storing asphalt millings on a compacted or impervious ground surface to ensure no groundwater is degraded.
 - c. Using water for moisture control to prevent fugitive dust.
 - d. Limiting the time asphalt millings are exposed without being compacted, encapsulated, or sealed.

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2. **BMPs for the Application of Asphalt Millings:** Asphalt millings shall be applied such that:
 - a. They are above the zone of frequent soil saturation to minimize contact with groundwater.
 - b. They are used in a manner that will protect from erosion.
 - c. They are used only for surface application on dry ground. Use as fill in low lying or ponded areas is not permitted.
 - d. They are sealed or encapsulated. Compaction is required, at a minimum, for the use of millings in edge drop-off repair, pothole repair and re-surfacing an unbound aggregate driveway after a drainage pipe clean-out or replacement.
3. **BMPS for Beneficial Use and Application:**
 - a. Asphalt millings may be beneficially used in the following applications:
 - i. At asphalt manufacturing plants to be incorporated directly into asphalt.
 - ii. As bituminous surface treatments as a substitute for course aggregate on surface treated roads in accordance with the DelDOT Standard Specifications.
 - iii. As a substitute for aggregate in embankment fill.
 - iv. Broken up and left in place under an embankment in accordance with DelDOT Standard Specifications .
 - v. As a substitute to graded aggregate to repair edge drop-offs on rural roads.
 - vi. As a temporary pothole repair on rural roadways.
 - vii. As a substitute for graded aggregate for road base course and sidewalk base course.
 - b. Asphalt millings used as a substitute for aggregate in embankment fill shall be used in accordance with DelDOT Standard Specifications and under the following conditions:
 - i. The asphalt millings shall be placed at least 12 inches above the zone of frequent soil saturation.
 - ii. There shall be a minimum of 5 feet of cover soil on top of the asphalt millings unless used as a roadway base course or sub-base course.
 - iii. There shall be a minimum of 2 feet of cover soil on the sides of the asphalt millings.
 - c. Asphalt millings used as a substitute to graded aggregate to repair edge drop-offs on rural roads shall be used in accordance with DelDOT Standard Specifications and under the following conditions:
 - i. The unbound asphalt millings shall be compacted.
 - ii. The location and amount of asphalt millings used shall be recorded.
 - iii. Should dusting or erosion become an issue or produce a citizen complaint, a tacking agent or more permanent repair will be applied as soon as practical.
 - d. Asphalt millings used as a temporary pothole repair on rural roadways shall be used in accordance with DelDOT Standard Specifications and under the following conditions:
 - i. Unbound asphalt millings shall be compacted.
 - ii. Unbound asphalt millings shall be used as a temporary fix only and will be followed up with a more permanent repair as soon as practical.
 - iii. Should dusting or erosion become an issue or produce a citizen complaint, a tacking agent or more permanent repair will be applied as soon as practical.

e. Asphalt millings used as a substitute for graded aggregate for road base course and sidewalk base course shall be used in accordance with DelDOT Standard Specifications and under the following conditions:

- i. The asphalt millings can be crushed, screened, and blended with conventional aggregate material or reclaimed Portland cement concrete.
- ii. The asphalt millings shall be placed above the water table.
- iii. The asphalt millings shall be capped with a paved surface course.

Upon SHWMS' receipt of an agreement by an appropriate DelDOT representative to conduct the asphalt milling recycling operations in accordance with the above BMPs, the Department will allow BUD #34/051018B to expire on May 10, 2018 and will not require permit renewal.

In the event DelDOT's asphalt milling recycling operations are modified from those described above, DelDOT must immediately contact the SHWMS for a re-evaluation of this permitting decision.

If you have any questions concerning this decision, please contact me at (302) 739-9403, option 8.

Sincerely,



Jason W. Sunde
Environmental Program Manager
Solid and Hazardous Waste Management Section

cc: David Nicol, Assistant Director, Engineering Support, DelDOT

JWS:MBCA:jmp
MBCA18010



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF SOIL AND WATER CONSERVATION
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

OFFICE OF THE
DIRECTOR

TELEPHONE: (302) 739-9921
FAX: (302) 739-6724

Memorandum

DATE: March 24, 2009
TO: All Delegated Agencies
FROM: Randy Greer, Engineer VI
Sediment & Stormwater Program *RKG*
RE: Policy Memo
Employing BAT for Turbid Discharges
CC: Jamie Rutherford, Program Manager
Sediment & Stormwater Program Staff

Dear Delegated Agent,

The Department has received several requests recently for guidance on making recommendations when a turbid discharge condition occurs, even when traditional ESC practices have been implemented in accordance with an approved plan. This policy memo is intended to provide such guidance. It is important to understand that merely implementing an approved plan does not relieve a permittee from his/her obligation under the Federal Clean Water Act to take whatever measures are reasonably necessary to minimize environmental impacts associated with land development and construction activities.

Regulatory Background

Under the Federal Clean Water Act, stormwater runoff from construction activities is classified as an industrial discharge subject to the permitting requirements of the National Pollutant Discharge Elimination System (NPDES). The USEPA has developed a General Permit for these construction activities which is administered in Delaware through 7 Del. C. Chapter 60.

Since numeric effluent limits have not been established for this industrial class, the "Best Available Technology", or BAT, is the standard that is applied at the Federal level for managing stormwater runoff from construction activities. In order to be granted delegation authority for permitting industrial discharges, State regulations must be consistent with the Federal requirements. Part 2 of Section 9 – Special Conditions For Storm Water Discharges Associated With Construction Activities, of the *Regulations Governing the Control of Water Pollution* defines BAT as:

“a level of technology based on the very best (State of the art) control and treatment measures that have been developed or are capable of being developed and that are economically achievable within the appropriate industrial category.”

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In order to gain coverage under the General Permit program in Delaware, a permittee must have an approved Sediment & Stormwater Plan in accordance with the requirements of 7 Del. C. Chapter 40, and file a Notice of Intent (NOI) prior to any land disturbing activity. Therefore, the requirements under Chapter 60 and Chapter 40 are inextricably linked.

Regulatory Authority for Amending Deficient Plans

Part 2, Section 9.1.02.5.D.1.d Special Conditions For Storm Water Discharges Associated With Construction Activities, of the *Regulations Governing the Control of Water Pollution* requires a permittee to amend a plan whenever:

“The Plan proves to be ineffective in eliminating or significantly minimizing the discharge of pollutants, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges with construction activity;”

In addition, the *Delaware Sediment & Stormwater Regulations*, Section 14.6 states that:

“The appropriate plan approval agency may require a revision to the approved plans as necessary due to differing site conditions.”

It is important to note that a permittee implicitly accepts these conditions if they wish to gain coverage under the General Permit program. If an individual does not wish to abide by any one of the conditions contained in the General Permit, they have the option to apply for an Individual Permit directly with USEPA.

Department Guidance on Addressing Turbid Discharges

It is the Department’s position that unless a site has taken all reasonable measures to employ BAT to reduce turbid discharges, the Sediment & Stormwater Plan must be revised accordingly. Therefore, the following actions should be taken when this situation occurs:

1. The CCR and/or agency site reviewer shall prepare an inspection report documenting the turbid discharge.
2. Whenever possible, the inspection report should be supported with photographic evidence, both on-site and off-site as applicable, of this discharge.
3. The inspection report shall state that the plan must employ BAT to address the turbid discharge condition. This may be addressed initially with appropriate field changes to the plan.
4. If previous attempts to control a turbidity problem through field changes have not been successful, the inspection report shall state that the owner must submit a revised plan to address the turbid discharge condition, along with a reasonable time limit to make such revision.
5. If the plan is not revised within the allowable time frame and continues to discharge turbid water, the site will be considered in violation.

BAT alternatives to be considered include, though are not limited to, flocculent application, on-site re-use, mechanical filtering, flow diversion, etc. While it may be helpful to include a note on the plan regarding use of Best Available Technology as necessary, the responsibility for choosing an appropriate solution lies with the permittee. In some cases, it may require a “treatment train” approach to meet the regulatory requirements. The Department recognizes that it is not reasonable to expect construction activities to have “zero impacts”. However, permittees must also recognize that there are often additional measures that can be taken when an approved plan does not adequately address those impacts.