

WATER QUALITY DESIGN MEMORANDUM

MEMO WQDM-02

REFERENCE: 2003 SCDOT Highway Design Manual Section 30.3.3, Road Design Plan Preparation Guide, Instructional Bulletin 2014-4

SUBJECT: Guidelines for Placement of National Pollutant Discharge Elimination System (NPDES) Information on Construction Plans, Instructional Bulletin 2014-4

The following information summarizes the new guidelines for placement of NPDES information on construction plans.

Setting the Location of Right of Way and Permissions for NPDES Requirements

Land disturbing activities determined necessary for the construction and maintenance of projects may require additional right of way or permissions. Secure permanent right of way for all land disturbing activities to be maintained after completion of a project and around all sediment control basins (temporary and permanent). Secure permission for all other temporary land disturbing activities, such as cleaning outfall ditches. If permission cannot be obtained, then the area will be acquired as right of way. In both instances, the area will be cleared and grubbed and seeded during construction. Consideration can be given to eliminating grubbing and providing only clearing in areas within jurisdictional boundaries.

Where additional right of way is more difficult to obtain due to high cost, urban areas, wetlands and/or significant trees, consider all means to circumvent these conflicts by minimizing the need for additional right of way, while still allowing implementation and maintenance of necessary erosion control facilities. Ensure the design plans address the General and Special Conditions of the environmental permit to minimize impacts.

An area between the silt fence and the toe of slope is needed to properly maintain the silt fence. Large equipment and trucks may use the area in front of the silt fence to access and remove of any sediment collected by the silt fence or a nearby silt basin. It is expected that the area between the silt fence and the toe of the slope is cleared and grubbed during construction and maintained with temporary seeding. When this additional area in front of the silt fence cannot be obtained, the maintenance of the silt fence will be handled as best as practical during construction.

Right of way limits in cut slope areas should be determined during the Design Field Review where interceptor ditches or other erosion control items are deemed necessary. The right of way line should maintain a uniform alignment and not fluctuate in and out,



where practical. The designer should use discretion when establishing right of way boundaries in order to minimize areas not needed for the construction and maintenance of the project.

Denoting NPDES Requirements on Plans

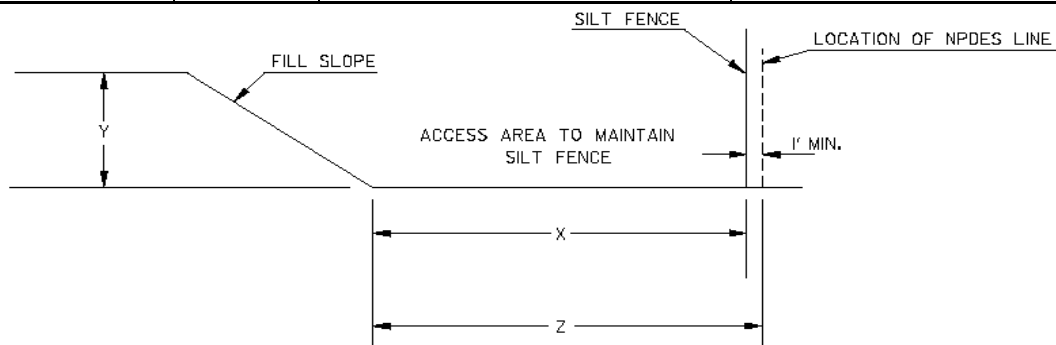
Place a special line denoting land disturbing activities for NPDES only when it is necessary to go beyond the construction limits. The NPDES line will have offset distances from the construction limits as specified in Figure 1. In areas where temporary land disturbing activities are being performed and no construction limits are present, such as cleaning outfall ditches and bridge construction access, the NPDES line will be placed around disturbed area. This special line can be found in the custom line style palette and is shown here:

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NPDES LINE

Provide a silt fence for all fill slopes in order to minimize the erosion of sediment off the project site. The silt fence will be placed beyond the toe of the fill slope as shown in Figure 1. All silt fences will be cleaned periodically as sediment is collected. The anticipated reach of the contractor's equipment can be assumed to be 15 feet.

Height of Fill (Y) (feet)	Fill Slope	Minimum Silt Fence Offset from Toe of Slope (X) (feet)	NPDES Line Location Offset from Toe of Slope (Z) (feet)
<6	2H:1V	2	3
	4H:1V		
	6H:1V		
6-10	2H:1V	12	13
	4H:1V	3	4
	6H:1V	3	4
>10	2H:1V	12	13
	4H:1V	4	5
	6H:1V	4	5

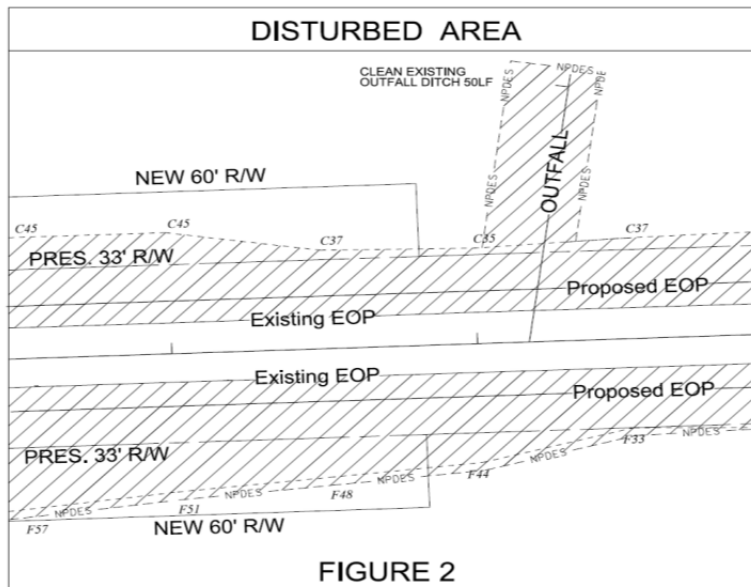


SILT FENCE OFFSETS

Figure 1

Computing NPDES Acreage

Compute the **Disturbed Area** for NPDES by determining the area between the NPDES lines less any existing pavement to be retained. The traveled way on existing dirt roads will not be included in the Disturbed Area. Utilize the construction limits (cuts/fills) in lieu of NPDES lines in areas where NPDES lines are not shown. See Figure 2 for an example of Disturbed Area. Show the Disturbed Area in acres, rounded up to the nearest tenth of an acre, on the Title Sheet within the NPDES Permit Information box.



Compute the **Project Area** for NPDES by adding up to 2 acres to the calculated Disturbed Area for projects less than 20 acres in size or adding up to 3 acres to the calculated Disturbed Area for projects 20 acres and greater in size. Show the Project Area in acres, rounded up to the nearest tenth of an acre, on the Title Sheet within the NPDES Permit Information box.

All increases in Disturbed Area must be approved by the Resident Engineer or their designee and noted on the marked-up plan sheets. Increases in disturbed area can be no more than 1 acre at any one location. Any Disturbed Area increases, whether one-time or the sum of previous increases, causing the Disturbed Area to surpass the Project Area will be considered a Major Modification. The Notice of Intent (NOI) must be updated and resubmitted to SCDHEC for all Major Modifications. Work in locations that create a need for a Major Modification cannot commence until approval is received from SCDHEC.

NPDES Quantities and Bid Items

Temporary NPDES facilities installed by permission will be seeded, according to the temporary seeding schedule, at the time of installation. The permanent seeding schedule should be used after the temporary NPDES facility has been removed and the area reclaimed. Permanent NPDES facilities will be seeded according to the normal seeding schedule. All seeding will be completed and paid for in accordance with the *Standard Specifications for Highway Construction*.

If the area required for NPDES is to be reclaimed, then include the quantity of soil for re-grading in the total quantity of “Silt Basins” and show the necessary seeding in the quantities. The following items are to be removed and disposed of in the bid item for “Temporary Sediment Control Structure” where it is necessary to reclaim the area in which a “Temporary Sediment Control Structure and Basin” is located: the structure and appurtenances, all riprap associated with that basin, pipe connected to the structure, anti-seep collars, and the fence and gate surrounding the basin.

Coordination of Hydrology/NPDES Studies with the Rights of Way Office

It is always preferable to have the final hydraulic and NPDES designs shown on the plans for right of way acquisition. When the final hydraulic/NPDES designs are not available to be placed on the right of way plans, make every effort to include all hydraulic/NPDES designs that affect right of way. However, when Right of Way Plans have been sent to the Rights of Way Office prior to receiving the final hydraulic and NPDES studies, revisions to the Plans, especially to the existing hydrology and erosion control elements, can be expected. Upon receipt of the final hydraulic and NPDES design from the Hydraulic Designer, the Roadway Designer will make the necessary revisions, noting appropriately on each sheet where the following revisions are made: “Revisions made to Tract XX in accordance with the hydraulic and/or NPDES studies dated _____ (Roadway Designer initials and date).”

The Road Designer will forward the revised sheets to the Preconstruction Support Operations Office to be forwarded to the Rights of Way and Environmental Offices. If hydraulic/NPDES revisions are made to parcels that have already been acquired (including permission granted), the Hydraulic and Roadway designers should attempt a resolution before finalizing the revisions and revisiting the property owner.

Implementation Schedule

Implement these changes immediately for all projects that have not been submitted to Letting Preparation for an upcoming letting and have not had and NOI submitted to DHEC.

James W. Kendall, Jr.
Preconstruction Support Engineer

October 19, 2016
Effective Date

JWK

ec:

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