

Industrial Activities Program

DOT's NPDES Permit at Part II.E

DOT Upgrades Stormwater Pollution Prevention Plan Website

The SPPP and the SPCC programs are process intensive programs that require reporting and updating over time. The initial versions were hard copy documents that were soon out of date after the program was established. Reprinting and coordinating updates required significant resources and staff. In addition, programs required reporting which would have resulted in thousands of hard copy documents being sent to a central location.

DOT resolved this problem by developing an internet based management system that allowed for the over one-hundred and fifty (150)

end users across the state to input, update, and receive information in an efficient process that facilitates communication and control while maintaining environmental compliance.

This project received first place in the Continuous Process Improvement Program for the Labor Hours Saving category in 2008. The SPPP/SPCC website will eventually store electronic site maps for all industrial facilities.



SPPP/SPCC Training Utilizes *Eliminate Live Web-based Approach*

To introduce the upgraded SPPP website, DOT IT staff worked with the SPPP/SPCC project team to organize a web-based training session for DOT Operations Staff across the state. A few hundred staff members "dialed in" to a training session hosted out of Raleigh's New Hope Center, without having to leave their home base.

Additional training tools for the upgraded website include:

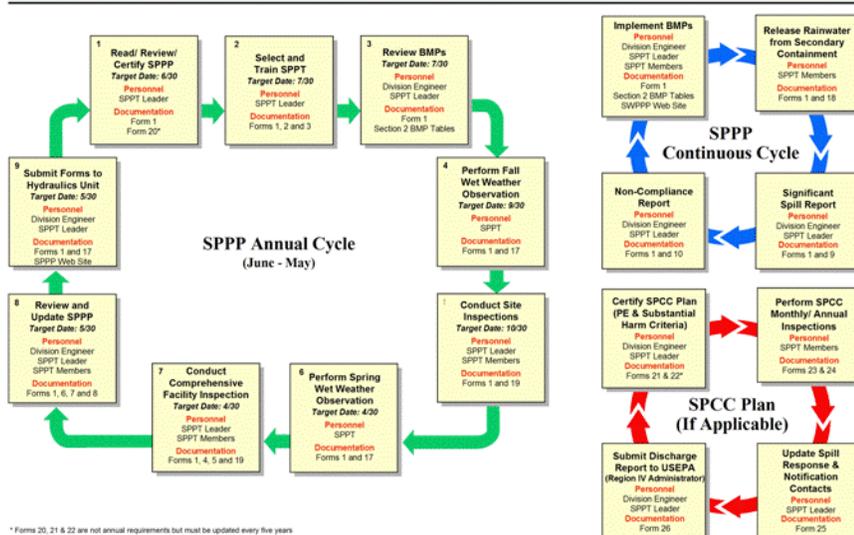
- Division-wide training sessions covering website modifications in greater detail took place in early 2008
- DOT is updating their SPPP training video and adding a new video on spill response to better cover the SPCC regulations.
- The Industrial Facility and Maintenance Activities Guidance Manual will include chapters on SPPP and SPCC-related topics.

Program Objectives

Objectives established by DOT's Permit in Part II.E

- Maintain and implement a Stormwater Pollution Prevention Plan (Plan) for each facility with an industrial activity that is covered by this permit.
- Develop and implement a Plan prior to operation of any new facilities.
- Perform visual monitoring/inspections at each facility.
- Implement BMPs.

NCDOT Process Diagram for Stormwater Pollution Prevention Plan (SPPP) & Spill Prevention, Control and Countermeasure Plan (SPCC) Plan



Revised SPPP Process Diagram to include SPCC requirements. (see article at top of page)





HSP Develops Industrial Facility and Maintenance Activity Training Manual

DOT is in the process of developing a comprehensive Industrial Facility and Maintenance Activity Training Manual that will cover topics ranging from Fertilizer Storage and Application to Bridge and Culvert Maintenance. The Manual will focus on how to conduct industrial activities while protecting stormwater quality. In addition to the Manual, posters, flyers and interactive games are being created to better equip Operations staff with stormwater training materials.

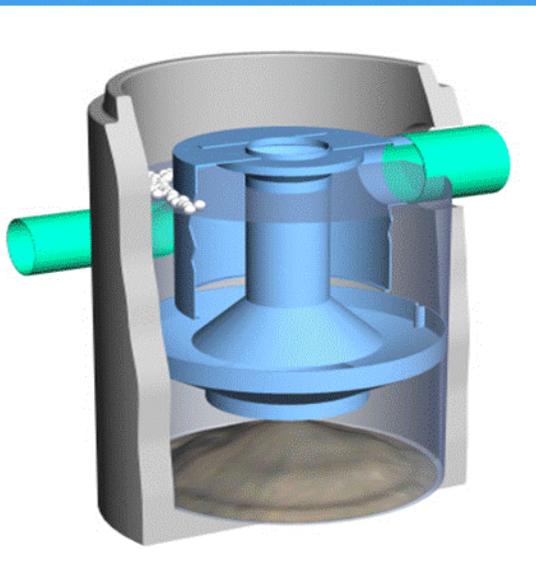


Diagram of Hydro International's Downstream Defender that is being monitored at the Cumberland County Maintenance Yard.

Research at Maintenance Facilities

A Hydrodynamic Vortex Separator (HDVS, also known as the Downstream Defender) is installed at the DOT maintenance yard in Fayetteville, NC (Cumberland County Maintenance Yard) to determine whether it effectively removes certain constituents from stormwater. Water samplers have been installed at the inlet drop culverts or inlet pipe as well as the outlet pipe for each installation. Runoff samples are collected sequentially during each event and either automatically or manually composited. Bulk precipitation chemistry is also collected at each installation. Water samples are analyzed for the following constituents: total suspended solids (TSS), turbidity, pH, specific conductance, NH₄-N, NO₃-N, TN, dissolved total phosphorus (DP), total phosphorus (TP), dissolved organic carbon (DOC) and oil and grease (O&G). (from Research project 2006-04 abstract written by Dr.'s Wu and Allen.)

DOT Develops/Updates SPPPs

DOT developed the SPPP website to assist industrial facility personnel with NPDES Permit compliance. Designated Operations staff document visual monitoring, required by Part II.E.3.b. of the Permit via the website twice each year. DOT also ensures that Stormwater Pollution Prevention Plans (SPPPs) are created for new industrial facilities and all existing SPPPs are implemented and maintained per Part II.E.1.b. of the Permit. There are currently over 190 SPPPs for industrial facilities and over 100 facilities requiring SPCC Plans.

For more information about
DOT's Industrial Activities
Program,
CONTACT

Johnie Marion
ROADSIDE ENVIRONMENTAL
UNIT
919-861-3770