

Erosion control techniques updated

For over a decade people doing construction have turned to the Wisconsin Construction Site Handbook, known as the “Blue Book,” for technical specifications on soil erosion and sediment control. Technology has changed; research and experience have greatly expanded; new requirements are in place. It was time for an update.

New standards are now available on DNR’s Web site for more than two dozen control methods— from dust control to vegetation buffers. They specify the minimum requirements needed to plan, design, install, and maintain a wide array of conservation practices.

Designed to be easily and regularly updated, they were developed by a statewide Standards Oversight Council (SOC) with membership from DNR, WisDOT, the Department of Agriculture, Trade and Consumer Protection, and other agencies. The SOC works through and coordinates the needs of diverse interests in developing technical standards for conservation practices.

The new standards reference products available on PAL (the WisDOT Product Acceptability Lists) which lists tested and approved erosion control products. Using it will help you select and properly install erosion mats, soil stabilizers, tackifiers, inlet protection, temporary ditch checks, in-stream sediment traps, and concrete block revetment systems. The PAL is updated three times a year and lists products by name and manufacturer.

Using the revised standards should make it easier and faster to develop erosion control plans for construction projects. It can also streamline the permitting process for most of them. They are effective for the 2005 construction season.

“We have been doing erosion control plans and implementation for 10 years

plus, but now we have to do it for sites down to one acre instead of five,” says Dan Fedderly, Administrative Coordinator of the Wisconsin County Highway Association (WCHA). “The new standards take existing processes and ensure that we are using the best materials and methods available. On road projects it affords a certain degree of assurance that when you put these measures in place they will achieve the objective we’re looking for.” Fedderly was a member of the statewide council advising DNR on the standards.

To assist local road agencies, WCHA created a set of standard erosion control plans and summarized them in a matrix. The matrix tells which erosion control method to choose for each common condition or situation. It is available on the WCHA Web site, and an expanded version is part of the WisDOT Facilities Development Manual.

Many counties have made the permitting process easier and faster for their transportation agencies by adopting standard plans and forging agreements between zoning, land conservation and highway agencies. In Dane County, for example, a routine permit request and approval can be completed the same day via e-mail by referencing the standards.

Stormwater after construction

Another method of pollution control that takes effect this fall is Post-construction Stormwater Management. These rules apply to new construction projects submitting a Notice of Intent to DNR after October 1. While the rules are primarily aimed at developments, they would also apply to projects that increase the carrying capacity of a road—expanding from two lanes to four, for example.

The new rules put runoff management

consideration into the initial design phase of a project. The goal is to develop designs that minimize pollutant movement, maintain vegetative buffers, and limit peak flow rates to protect surface waters after construction is completed. Also, infiltration will need to be designed into the project where feasible. A technical standard for evaluating sites for stormwater infiltration was finished in May of this year.

Wet detention ponds are one tool for managing runoff and have become a familiar sight in many parts of the state. Technical standards for them were completed in 2003. Swales are a newer method being designed into some new roads in place of conventional ditches. These wider, flatter vegetated areas let water move slowly and will allow for pollutants to settle out and provide for some infiltration. Another method is vegetated buffer strips that separate impervious areas like parking lots from streams. Like swales, the buffer slows water movement and filters pollutants. Technical standards for swales, infiltration basins and bioretention, were completed in August. Those for buffers are due in 2005.



Swale replaces ditch.

In summary, if you are responsible for a construction project: 1) Know if a stormwater erosion control permit is required and from where (county, DNR, municipality). 2) Use the new standards, PAL products, and standard plans that meet local and state requirements. 3) If a DNR permit is needed, submit a Notice of Intent as soon as possible but after appropriate erosion control and storm water management plans have been developed. 4) Follow the plans and permit requirements during construction.

Local information resources include county highway, land conservation and zoning departments and regional DNR stormwater contacts. For technical standard and matrix Web addresses see Resources, page 6.



Wet detention pond.