

# Watershed Action Team

## *Environmental Water Restoration Quarterly*

Carroll County Department of Land Use, Planning & Development

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### Stream Corridor Assessment

The stream corridor assessment is a tool developed by the MD Department of Natural Resources to assess the health of a stream system.

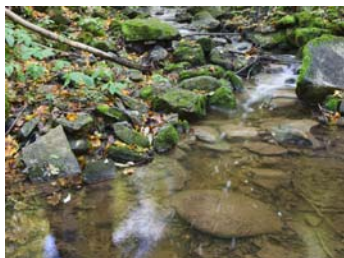


It was designed as a way to quickly assess the general condition of a stream system and identify impacts that could be addressed to improve the overall health of the drainage network.

This assessment reached out to 590 properties within Prettyboy. About 50% of the property owners who were contacted granted permission for Water Resource's staff to perform the stream walk. This allowed the staff to assess approximately 80 of the 100 miles of stream within the Prettyboy Watershed.

The stream evaluation concentrated on eight types of impairments including stream bank erosion, inadequate stream buffers, trash dumps, pipe outfalls, exposed pipes, channel alteration, in stream construction and fish blockages.

Identified impacts were assessed based on three factors; how severe the issue is, how accessible the location is and whether or not the issue would be easy or difficult to correct. County staff assessed each impact and assigned a number for each of the three factors in order to rank the impacted sites across the entire watershed.



### Prettyboy Watershed

**Stream Bank Erosion:** Field crews identified a total of 172 erosion sites within the Prettyboy watershed, with 14 being identified as severely eroded. The severely eroded sites totaled approximately 1.3 miles of streambank or about 1.5 percent of the total stream miles that were assessed.



**Inadequate Stream Buffer:** Within the Prettyboy watershed 118 sites were identified as having an inadequate stream buffer. Field crews identified 57 of these sites as severe. The severe sites totaled 5.1 miles or about 6 percent of the total stream miles that were assessed.



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**Severe Rating Criteria:**

- 1) **Erosion:** a severely eroded section of stream is greater than 1,000 feet in length and has unstable banks on both sides of the stream.
- 2) **Inadequate Buffer:** an inadequate buffer rated as severe will have no trees on either side of the stream that is continuous for more than 1,000 feet.

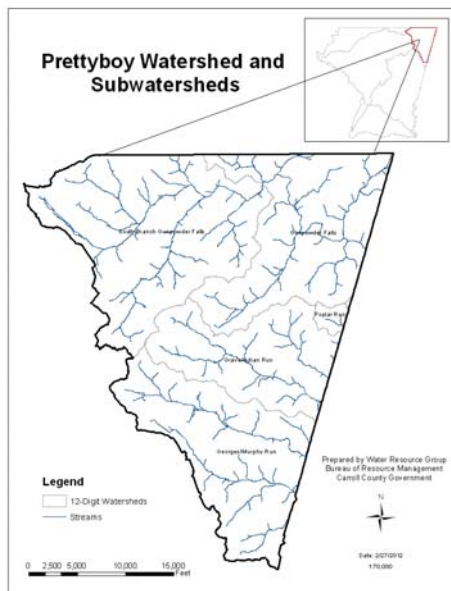


## Where do we go from here?

The bureau is currently developing two plans for the Prettyboy watershed. The first is a background report for the entire watershed that looks at the natural and human characteristics of Prettyboy and will have a summary of the findings from the stream corridor assessment. The second is an implementation focused plan

that will lay out the bureau's goals for addressing identified impacts within the watershed. Our focus if funds are available will be to address erosion problems through stormwater management and tree plantings.

If you have questions about the stream corridor assessment or may be interested in addressing impacts on your property, please contact the Carroll County Bureau of Resource Management 225 North Center Street Room 209 Westminster, MD 21157. 410-386-2506.



## 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control

The Maryland Standards and Specifications for Soil Erosion and Sediment Control have a lengthy history. In addition to the current 1994 manual there are versions from 1990, 1983, 1975, and 1969. The agencies preparing the Standards and Specifications encourage improvement to existing practices and development of new ones. The innovations by the regulated community resulted in the need for continuing updates to the State's standards and specifications.

The currently valid standards and specifications, The 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control, will soon be replaced by the 2011 version. As far back as 1996 the Maryland Department of the Environment (MDE) indicated that it would issue a set of errata reflecting comments received about the 1994 edition after it hit the streets. As time went on innovative practices and concerns raised by the environmental community indicated that a new version, reflecting a complete revision, was in order. MDE released for comment the first draft of the brand new version in October, 2009. Based on responses from the community and changes in EPA requirements, this initial draft underwent extensive revisions. These revisions actually resulted in a slimmed down content. Careful editing of the standard details consigned most explanation, justification, design criteria, and commentary concerning the practice to the introductory portion of each standard and specification. The actual standard detail contained the diagrams and criteria needed by designers for inclusion on erosion and sediment control plans and by contractors for proper installation.

Ultimately, after three drafts, on January 9, 2012 MDE adopted the final version of the 2011 Standards and Specifications and the revised portion of COMAR relating to sediment control. The revised regulations retained a grading unit requirement; additionally, it addressed the grandfathering of approved erosion and sediment control plans. The three criteria relating to grandfathering address what happens to existing approved plans, plans that are under development during the transition, and plans that require renewal.

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In the broadest sense, the 2011 manual is more evolution than revolution. The revision added fifty eight pages and twenty five new details including wash rack, diversion fence, filter berm \ filter log, temporary gabion outlet structure, combination inlet protection, and filter bag. Some of these details reflect inclusion of practices long in use and accepted as complimenting the 1994 Standards and Specifications (such as the filter bag and variations on inlet protection). Some of the added details expanded on a single one from the existing 1994 version. For example, the 2011 version provides four standard details for erosion control matting where there was only one before (i.e. permanent or temporary conditions and ditches or slopes). Similarly, standard silt fence begat a new detail for silt fence on pavement.

There were also some practices that were deleted. After consideration of effectiveness or balancing benefit with impact, MDE dropped four details: the stone outlet sediment trap (SOST), the temporary access crossing – ford, the straw bale dike and tree protection. The ford creates the potential for too much damage to the stream and the effective life span of the straw bale dike was judged to be too short. The SOST is very similar in application to the stone-riprap outlet sediment trap (SRROST) and the SRROST allows for treating up to ten acres of drainage (twice that of the SOST).

The most effective way to prevent erosion from construction activity is to maintain vegetative cover or at least replace it as soon as possible. For that reason the seeding specifications received special attention. Table 25 of the 1994 Standards and Specifications (Permanent Seeding For Low Maintenance Areas) contained three species (including Crown Vetch) considered invasive or otherwise undesirable by the Maryland Department of Natural Resources, other agencies and private conservation groups. The 2000 Maryland Stormwater Design Manual included native species in its landscaping guidance. The Dam Safety Division in MDE's Water Management Administration objects to the use of Crown Vetch on dam embankments. Accordingly, MDE decided it was time to align with the



other agencies and purge the seeding recommendations of any undesirable species and utilize native species wherever possible. During the drafting phase of the new manual the USDA – NRCS National Plant Materials Center was assisting the Baltimore Soil Conservation District with alternatives for vegetative stabilization of pond embankments. The Center provided recommendations based on Conservation Practice 342. These recommendations ultimately found their way into the 2011 version of the Standard and Specifications.

The revised seeding recommendations (Table B.3: Selected List Of Permanent Herbaceous Seeding Mixtures) include 13 seed mixes of native or otherwise acceptable species that have the desired proven history of use in Maryland. To aid in selecting from among these mixes, the new manual provides another table (Table B.2) that lists 15 site conditions (for example: steep slopes, dikes and dams, grassed waterways, heavy use areas, residential and commercial lawns) and ranks the seeding mixes as recommended or alternative for the specific site condition.



In conjunction with the changes to the seeding mixtures in the Standards and Specifications, the revisions to sediment control COMAR tightened the timeframes for completing stabilization of inactive disturbed soil. Shorter time limits for stabilization will likely require the most adjustment for contractors. These timeframe restrictions are located in two different regulations. Location one is in the regulation dealing with application for approval of erosion and sediment control plans (COMAR 26.17.01.07). In the section listing minimum content of the application package there is a requirement for a note on the plan listing the details of temporary and permanent stabilization measures. It is here in this note that the shortened timeframes (three days for perimeter controls, water conveyances, and slopes and seven days for all other areas) are specified.

The second location dealing with the shortened timeframes for stabilization is in the regulation dealing with the content of local government erosion and sediment control ordinances (COMAR 26.17.01.04). Within this regulation there is a list of criteria that MDE must use to determine if an ordinance is acceptable. One of these items requires that a local ordinance make the new three \ seven day

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stabilization requirements “binding” regardless of plan status.



In conjunction with the Stormwater Management Act of 2007 the changes to sediment control COMAR and the Standards and Specifications encourage environmental site design. This results in development that mimics natural hydrologic runoff characteristics, integrates erosion and sediment control with stormwater management, and starts erosion and sediment control planning much earlier in the development process. All this is required to be completed to the maximum extent practicable. The first section of the new manual (Section A – Planning and Design) is devoted to guiding plan designers in meeting these requirements.

The review process includes three phases of plan development. The Concept Plan (Phase One) requires a narrative explaining how erosion and sediment control will be integrated into the stormwater management strategy. Additionally, this phase requires the gathering of basic data about the development site – its topography and other physical characteristics. The identification of the site’s hydrology is included in this phase. The Site Development Plan (Phase Two) identifies the footprint of the proposed project. Detailed designs, computations and grading plan are included in this phase. The Final Plan (Phase Three) includes identification of the limit of disturbance, erosion and sediment control practices, notes, details, and representative cross sections as appropriate. Also required are phasing and sequence of construction, which must address erosion and sediment control installation, maintenance, and removal.

The transition to the new sediment control COMAR and manual is not yet complete. Although adopted on January 9, 2012, the revised regulations and Standards and Specifications are not effective until January 9, 2013. Within the year MDE must issue its model ordinance and the local agencies must revise their ordinances accordingly and submit them to MDE for review and approval.



MDE issued its model ordinance the end of February. The County in conjunction with the Carroll Soil Conservation District is reviewing its ordinance against the model. The District is updating its checklists to align with the three phase plan design process. The county will submit its revised ordinance to MDE by June 9, 2012. The county will decide how to assist the community in transitioning to the revised state regulations, Standards and Specifications, and county ordinance. The county will likely offer written guidance, hold workshops or a combination of both.



Much of the data presented in the original manuals was drawn from agricultural practices for soil conservation. A great deal of this information carried through into later versions of the manual with minimal change. The sediment control COMAR amendments and the latest version of the Standards and Specifications provide an opportunity to establish practices uniquely suited for commercial construction that takes advantage of everything that has been learned since 1969.

Anyone interested in the content of the new regulations or Standards and Specifications is encouraged to visit the MDE web site at <http://www.mde.state.md.us>

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**[2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control](#)**

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