

**Stormwater Act of 2007
Focus Group Meeting
Maryland Department of the Environment (MDE)
Baltimore, Maryland
January 30, 2008 9:30 AM – 12:00 PM**

Participants

Ab Tech Industries: Austin Meyermann
Acevedo Investment Group, LLC: Eduardo Acevedo
Alice Ferguson Foundation: Alison Mize
Alliance for Sustainable Communities: Anne Pearson
Anne Arundel County Office of Planning & Zoning: Elizabeth Burton
Anne Arundel County Dept. of Public Works: Dennis McMonigle, Masoud Ghatineh
Anne Arundel County: Ken Weeks
Baltimore City: William Stack
Baltimore County Dept. of Environmental Protection & Research Management: Al Wirth
Baltimore County Dept. of Public Works: Sheldon Epstein
Baltimore Harbor Waterkeeper: Eliza Steinmeier
Ben Dyer Assoc.: Mike Novy
Burgess & Niple: Andie Murtha
C. D. Meekins & Assoc.: Chris Taylor
Chesapeake Bay Foundation: Bruce Gilmore
Christopher Consultants, Ltd.: Brian Mastervich
City of Rockville: Mark Charles
Collinson, Oliff, & Assoc., Inc.: Keith Ulrich
Consultant: Fran Flanigan
Critical Area Commission: Lee Anne Chandler
Dewberry: Sharon Freiland
DeMario Design Consultants, Inc.: Rich DeMario
Drum Loyka & Assoc., LLC: William Bower
ECS Mid-Atlantic, LLC: Robert Hackman, PE
Farrand & English, Inc.: Bert English
Fort Dedrick: Mark Lewis
Frederick County: David A. Crable, Betsy Smith, Tim Goodfellow
Friends of Rock Creek: Steve Dryden
Harford County Department of Public Works: Bruce Appell
Herring Run Watershed Association: Jen Brock-Cancellieri
Howard County: Chad Edmondson, Charles Dammers, Howard Saltzman
Howard County Department of Public Works: Mark Richmond, Rick Powell
John E. Harms & Associates: Ken Phillips, Linton C. Pumphrey
Johnson, Mirmiran & Thompson: Steve Aust
Loiederman Soltesz Associates, Inc.: Omar Manneh, M. Taghi Behzadi
Loran Design: Sara Loran
MDE: George Harman, Ken Pensyl, Brian Clevenger, Stewart Comstock, Deborah Cappuccitti, Dela Dewa, Sekhoane Rathebe

Maryland Department of Natural Resources: Jordan Loran
Maryland Environmental Service: Nancy Erwin, Megan Simon, Marisa Olszewski
Maryland Municipal League: Tom Reynolds
Maryland Stormwater Consortium: Diane Cameron
McCrone, Inc: Bill Warnock
Moffat & Nichol: Mitch Manchester
Montgomery County: Rick Brush
Montgomery County Department of Environmental Protection: Meo Curtis
Patapsco Tributary Team: Stuart Stainman
Queen Anne’s County Department of Public Works: Vijay Kulkarni, John Scarborough
Rich & Henderson, P.C.: Trent Zivkovich
RK&K, LLP: Charles Wallace
Rodgers Consulting: Paul F. Bogle
Sierra Club: Earl Bradley
Site Resources, Inc.: Charles R. Wilson, Jr.
South River Federation: Drew Koslow
State Highway Administration: Steve Buckley
Terrain, Inc: Roy Little
University of Maryland Baltimore County: Stu Schwartz
University of Maryland College Park: John Coffey
Wallace, Montgomery & Assoc.: Gregg Iskra
Whitman, Requardt & Assoc.: Michael Hearn, Eugene Elias

Handouts

“The Stormwater Management Act of 2007 – Proposed Time Line for Regulation Adoption”
http://www.mde.state.md.us/assets/document/sedimentStormwater/SWM_Act_Regulation_Schedule.pdf.

Mitchie’s Legal Resources: “§4-201.1. Definitions.” and “§4-203. Duties of Department.”
http://mlis.state.md.us/asp/web_statutes.asp?gen&4-201.1

“Stormwater Management Act of 2007 Focus Group Meetings” (schedule)
http://www.mde.state.md.us/assets/document/sedimentStormwater/Focus_Group_Schedule.pdf

Introduction

Mr. Clevenger began the meeting by providing background information on the development of the draft revised Chapter 5 of the 2000 Maryland Stormwater Design Manual (Manual) as implementation of the Stormwater Management Act of 2007 (Act). Mr. Clevenger indicated that, the intent of the Act, which was signed into law by the Governor in spring of 2007, is to institute Environmental Site Design (ESD) into stormwater management practices to the “Maximum Extent Practicable” (MEP). Details of the Act were provided in handouts.

Mr. Clevenger reviewed the progress to date with regard to implementation of the Act and indicated that a one-day public outreach meeting was held in July of 2007 to gather insight from a cross-section/representative group of those affected by the change, including environmental advocates, designers, developers, plans reviewers and public works officials. As a result of input from the July

2007 meeting, the Maryland Department of the Environment (MDE) developed an outline of the plan and schedule for implementation, which was posted on their website in September 2007. A draft revised Chapter 5, containing placeholders for sections to address redevelopment, retrofits, and protected waters, was also posted to the website for public input. Mr. Clevenger introduced the other primary authors of the draft revised Chapter 5 from MDE in attendance at the meeting: Ken Pensyl, Stewart Comstock, Deborah Cappuccitti, Dela Dewa.

Mr. Clevenger stated that the current meeting is the third in a series of what MDE plans to be six focus group meetings to discuss the draft Chapter 5 revisions with interested parties. (The sixth meeting will be scheduled for sometime in the upcoming weeks and will be located in the greater Washington D.C. metropolitan area.) He explained that the draft revised Chapter 5 being presented should be seen as a dynamic document. The purpose of the focus group meetings is to accept comments and suggestions from the public and plans review and design community to assist MDE in developing the draft into a useful and informative document. Mr. Clevenger noted that, in addition to comments made publicly at the meeting, MDE will accept written comments, including hand-edited hardcopies of the draft Chapter 5 in addition to edits and comments received electronically. He stressed the importance of public feedback for the information and practices that had been drafted into Chapter 5 in order to determine which practices would and would not work on a practical level. Mr. Clevenger also explained that MDE and its subcontractors will be adding graphics to the document and completing situational model runs for some of the included practices.

Mr. Clevenger reviewed the evolution of Maryland's stormwater management regulations from the policies of managing for flood protection volume (two and 10-year frequency storm events), conserving post-development peak discharge rates, and attempting to force infiltration. It was later recognized that design practices such as peak shaving often resulted in scouring of downstream banks from increased mid-bank full flows. Mr. Clevenger stated that the Manual attempted to encourage designers, planners, and developers to move away from such practices and consider reducing runoff at the source rather than relying on end of pipe treatment or ponds. However, before the Act, such practices were optional. Mr. Clevenger indicated that a narrative of the State's perspective on stormwater regulations is available on the MDE website.

Mr. Clevenger noted that the planning, design, and review workloads following the release of the draft regulations will most likely increase, especially for county planning and permitting officers. In addition to the increased workload, the transition will require a paradigm shift in thinking. He noted the challenge of defining MEP and achieving practical compliance coherence between newly required ESD and competing county planning codes and ordinances. In conflict with ESD, which would reduce impervious surface in an attempt to maximize infiltration and reduce stormwater runoff, such ordinances often require increased impervious surface area to accommodate citizens with disabilities, emergency response vehicles, and the like. Mr. Clevenger also noted the difficulty that MDE had determining the appropriate scale for ESD practices regarding design simplicity and providing the appropriate level of guidance to meet MEP. MDE anticipates that there will be disagreement between designers and plans reviewers on the minimum requirements. As the new regulations are drafted, MDE will try to strike an appropriate balance between defining a minimum standard and still allowing for flexibility in design.

Mr. Clevenger introduced the “Sandbox” issues that had been recorded at the meeting in Salisbury, Bel Air, and at a prior “in house” planning meeting at MDE. The issues included were:

- Conflicts in defining MEP
- Conflicts between ESD requirements and local ordinances and planning codes
- Plans review workload increase
- Construction maintenance and inspection workload increase
- Including currently exempt (in some counties) agricultural buildings in ESD
- Expedited review incentives for higher design standards in recognition that time is money
- Including considerations for forestation/afforestation and other State/Federal laws in planning

Open Discussion

A participant asked: in recognition that the Act will require all new and re-development to use ESD, how is it that MDE is only revising Chapter 5 of the Manual? Mr. Clevenger responded that, because Chapter 5 focuses on the technical application of the new law, it is the most critical component to successful implementation of the Act. In addition, the strict timeline to implement the regulations meant that MDE had to limit its focus for the time being.

A few participants expressed concerns regarding erosion and sediment control for development sites and noted that this fundamental issue is not addressed in the draft revised Chapter 5. Concerns were mainly focused on employing stricter standards and enforcement during construction as well as improving standards for jurisdictions with limited regulation for construction practices.

A participant stated that there are fundamental differences between county codes for erosion and sediment control, such as Anne Arundel County’s cap on clear-cutting for construction set at 20 acres per project compared to St. Mary’s County’s much stricter limit of only four to six acres per project. The participant encouraged MDE to consider setting State minimum, numeric performance standards for erosion and sediment control in construction and to consult the Soil Conservation District (SCD) in establishing these standards. He added that the general NPDES permit is up for renewal and that adjustments therein are necessary to comply with the Act, including but not limited to daily inspections for construction site stabilization.

Mr. Clevenger and Mr. Pensyl, while agreeing that sediment control impacts receiving waters and can always be improved upon, explained that it is not completely within their department’s jurisdiction. Mr. Clevenger indicated that MDE engaged the SCDs in the process through surveys. Mr. Clevenger added that daily site stabilization is an option. However, enforcement is an issue because enforcement staff is limited and it is difficult to tie an individual site stabilization violation directly to downstream turbidity impacts. Mr. Pensyl added that plans reviewers should confirm that site stabilization methods for a plan conform to State water quality certification standards. A participant suggested that fines and permit fees could be a resource for funding additional staffing needs for enforcement. Alternately, third party inspectors could be used. Mr. Clevenger indicated that the enforcement component will be addressed in the upcoming statute.

A participant representing the Maryland Stormwater Consortium introduced a document the consortium has produced in response to the Act entitled, Core Environmental Site Design Principles

(Core Principles). The participant also introduced a corresponding flow chart that outlines a potential procedure for incorporating ESD in stormwater management planning and design to the MEP as mandated by the Act. Maryland Stormwater Consortium members reminded the group that the Act indicates that soil conditions and natural resources should be considered when determining the footprint for a site. Additional details on the Maryland Stormwater Consortium's plan of action were provided to MDE and are available to participants from Diane Cameron and Bruce Gilmore.

A participant asked how the Act will affect redevelopment and where such consideration will be included in the Manual. She specifically asked how redevelopment practices adhere to the Municipal Separate Storm Sewer System (MS4) retrofitting requirement and if stricter standards would be set for sites in areas that drain to impaired waters. Mr. Clevenger indicated that a placeholder for information on redevelopment practices (Section 5.3) had been included in the draft revised Chapter 5. He explained that current regulations provide that stormwater management practices are expected to control at least 20% of the impervious area at a redeveloped property. This minimum requirement should not be interpreted as a ceiling and was instituted in an attempt to take advantage of the opportunity for improved stormwater design that redevelopment presented yet avoid promoting suburban sprawl. He explained that prior to the Manual, there had been no regulation for addressing stormwater in redevelopment projects. It was brought to the attention of MDE at the time of the Manual's creation that more stringent requirements might encourage developers to develop greenfield sites rather than redevelop in highly urbanized areas where construction activities are more complex and more than 20% stormwater control may be difficult to achieve. Mr. Clevenger reminded the group that while MDE will be considering retrofits in the revised Chapter 5, the 2007 mandate does not require that existing development be addressed in the implementation of the Act. A participant from Anne Arundel County commented that his jurisdiction relies on the State to provide solid minimum standards and that these have been beneficial for them to promote redevelopment.

As a follow-up question, the participant asked about the various rates of redevelopment in Maryland and when localities could expect to see improvement in stormwater quality and volume from updates instituted during redevelopment. A participant responded that different counties have different requirements for redevelopment, and that Montgomery County, which sees a large amount of redevelopment, requires 100% stormwater control on redevelopment projects. Another participant also noted that Montgomery County has recently included considerations for addressing small lot drainage in building codes. A participant from Frederick County stated that his area experiences little redevelopment and more facility expansion projects in accordance with current use, which have been difficult to regulate unilaterally as either new development or redevelopment.

A participant asked MDE if installation of a green roof at a redevelopment site would constitute treating the recharge volume or would exempt the site from channel protection volumes. Mr. Clevenger responded that MDE certainly encourages the use of green roofs. However, these are considered semi-pervious surfaces and are obviously disconnected from the water table. Therefore they should be included toward the 20% redevelopment requirement but would not constitute grounds for an exemption. Mr. Clevenger stated that he expects the section of Chapter 5 regarding redevelopment to be written by May 2008. A question came up about defining green roofs more specifically for designers and planners. It was discovered that there were no designers present who had experience designing a green roof. Mr. Comstock encouraged anyone with more information on green roof design to send it to MDE.

A participant suggested requiring soil tests to inform the mapping and planning stage of stormwater design included in the draft revised Chapter 5. Another participant noted that parts of Montgomery County have soil types that are not suitable to many of the practices included in the draft revised Chapter 5. Mr. Clevenger noted that although a soil test is informative, it would be impractical to require one during the conceptual planning stages of every site. He requested that those attending from Montgomery County who were aware of the issue with soil type provide MDE with guidance about which ESD practices do or do not work there. Mr. Comstock agreed and noted that the practices in Chapter 5 were also available to be adapted to fit regional considerations.

A participant asked if the practices of topsoiling and soil amending should be required and inspected to increase the efficacy of ESD. The participant explained that topsoiling is helpful in aiding infiltration and is a pre-construction requirement in Montgomery County. Mr. Clevenger responded that the need for this would depend upon the practice. In addition, inspectors would need to be trained to recognize proper top soiling methods.

A participant expressed concern that Chapter 5 would allow blanket exemptions for sites with C and D type soils although she has knowledge of some practices that would cause stormwater to infiltrate these soil types. Mr. Clevenger and Ms. Cappuccitti agreed that in some instances, C and D type soils could be amended to allow for limited infiltration using practices such as bioretention and bio-swales. A participant from the geotechnical industry disputed that clay soils could be made to infiltrate and recommended that designers and planners use geotechnical surveys of sites early on to best understand their soil's capabilities. He added that infiltration is undesirable in areas of karst topography because it may result in the creation of sinkholes. The group formed a consensus that there are constraints on where each practice can be applied. A participant stated that US Department of Agriculture soil surveys are too general for a small site and suggested a site-specific soil overlay with percolation rate to the site plans. Mr. Clevenger stated that requiring perc tests for each site may be impractical. It was suggested that such a requirement be left to the discretion of the designer.

Mr. Clevenger responded to further concerns over language in Chapter 5 that would exempt impermeable soil types from the requirements. He explained that there is still wording in Chapter 5 that needs to be adjusted to reflect the requirements. He cited an example of an area that MDE had already flagged for wording changes where the use of the words 'shall' and 'may' give way to conflicting direction on the same practice. He noted that MDE would be making efforts to clarify all legal language because the content of the Manual revisions will carry the weight of law, because the document is incorporated into COMAR by reference. Ms. Cappuccitti added that local reviewers in previous meetings had expressed interest in being allowed the flexibility to use their best professional judgment. It was for this reason, she explained, that MDE had written Chapter 5 to encompass the overall method, rather than giving specific guidelines for each practice.

Mr. Clevenger responded to a comment that the best regulations are meaningless without enforcement. He agreed that enforcement is needed, but also noted that the issue at hand was to finish editing Chapter 5 for use.

Mr. Clevenger turned the discussion to the section of Chapter 5 devoted to planning. He said that this is one of the most critical components of the Manual, forcing developers and designers to consider

planning for stormwater management up front. Referring again to the “Sandbox,” Mr. Clevenger highlighted a few of the difficulties in planning that MDE had already discussed internally, and which had come up in prior focus group meetings. He stated that the planning section of Chapter 5 could require an extra step, a conceptual planning stage, not currently used in the review process for all jurisdictions. This could add workload, at least initially, for some reviewers. He also discussed the discrepancies in ease of planning for different types of sites, for example, a 200-acre subdivision versus a 10-acre commercial site.

A participant expressed concern over dealing with developers who are not environmentally conscientious when the minimum requirements are not explicit. She noted that the plans reviewing office in her county has worked with retailers that wanted to exceed parking lot minimums and stated that she feels that MDE may need to include stronger language into some of their regulations. She also raised concern over conflicts in compliance requirements between the Department of Public Works codes and the new stormwater management practices.

A reviewer from Howard County voiced concern that MDE had over-estimated the volume treatment potential addressed by each ESD practice. Mr. Clevenger responded that limitations on the efficacy of small scale nonstructural conveyances was one of the reasons that the expectation set forward in the Manual was to use multiple practices on each site. He also added that MDE subcontractors will be conducting modeling for select ESD practices to get a better understanding of scale, and requested that any party present whom has already completed modeling for any of the practices should share their results with MDE.

A participant asked for supporting information on the limited number of practices included Chapter 5. Mr. Clevenger explained that the list that MDE had developed was of the practices they decided were most appropriate for use in Maryland. He again encouraged people to provide MDE with any practice they felt was improperly excluded.

The same participant stated that Anne Arundel County encourages the use of Coastal Plain Outfalls for conveying water down slopes and that this practice is less expensive than installing concrete piping. Mr. Comstock responded that while mimicking the natural system is generally the best practice, MDE would not want to encourage the general use of steep slope conveyance systems for stormwater management. He stated that they may consider putting this practice in as an appendix or in a model in the Manual.

A participant asked that there be more guidance on reasonable square footage for the practices, especially in determining an appropriate roof to rain garden size ratio. She also asked that MDE include guidance on dewatering systems. Mr. Comstock encouraged her to provide MDE with examples not included in the draft revised Chapter 5.

Concluding Remarks

Mr. Clevenger asked that all other suggestions be provided to MDE. He specifically asked for comments on how to ensure that the practices included will be used to the MEP.

Mr. Comstock responded to a question about advancing technology and the potential for new practices to be accepted by MDE following the finalization of Chapter 5. He responded that, MDE will likely review any new ESD technology for its appropriateness for use in Maryland.

Mr. Clevenger explained the current water quality banking system that MDE uses for State and Federal projects as a last resort method if current practices cannot be used at a site. He explained that, many best management practices (BMPs) adopted for stormwater have fallen into disrepair or failed completely since they were installed. When State and Federal agencies, especially projects like straight roadways with the State Highway Administration, are unable to use adequate stormwater practices on their sites, they are given the option of using a trade system that allows for mitigation through retrofits of failed or failing stormwater management infrastructure. He presented this as an example of something that could be emulated in the local jurisdictions under similar circumstances.

Mr. Clevenger reviewed the remainder of the “Proposed Time Line for Regulation Adoption” which had been given as a handout and is also available on the internet:

http://www.mde.state.md.us/assets/document/sedimentStormwater/SWM_Act_Regulation_Schedule.pdf.

The meeting was adjourned.