Commonwealth of Pennsylvania
Sewage Advisory Committee
Minutes of the Meeting
February 8, 2013

Membership and function of this committee is established by 35 P.S § 750.4. Successors to the entities listed in the statute retain the right to representation of the original organization named in the statute, but are not entitled to more than one member, if they have merged.

For purposes of quorum, sixteen (16) organizations with voting members/alternates were recorded as present. Fourteen (14) organizations' members/alternates were Not Present. Three (3) member organizations have no current appointed member or alternate. The minimum quorum is one third of 30 appointed members/alternates able to cast votes. For this meeting, sixteen (16) organizations were present which exceeds the minimum ten (10) for a quorum.

Members are shown in boldface. Organizations and members and/or alternates present are indicated by mark (►).

Member Alternate Member	**Organization**
Samuel M. D'Allesandro, P.E., P.P., P.L.S. [chairperson] Charles B. Zwally, Esq.	Pennsylvania Vacation Land Developers Association
►**Jacqueline A. Peleschak, P.E.** Mark A. Malarich, P.E.	American Council of Engineering Companies of Pennsylvania
Arthur Hall Adams, AIA Caroline E. Boyce, CAE	American Institute of Architects--Pennsylvania
►**John F. Wagman** Gregory F. Scott	American Society of Civil Engineers
►**Scott E. Russell, P.E.** ►Michael A. Schober, P.E.	American Water Works Association (PA Section)
Commissioner Jeff Wheeland Douglas Hill	County Commissioners Association of Pennsylvania
►**Ralph DeFazio** Kyle Schmeck	County Departments of Health, Local Health Agencies
►**Sandra Orth** Mary J. Smith	Department of Community & Economic Development
(No member) Andrew Paris	Governor's Policy Office

Jonathan R. Beers, P.E. Steven E. Douglas	League of Cities and Municipalities
(No member) (No alternate)	Mortgage Bankers Association of Pennsylvania
(Member vacant) David R. Kauffman, P.E.	National Association of Water Companies
Michael McGraw (No alternate)	Pennsylvania Association of Plumbing, Heating & Cooling Contractors
►**Bruce Willman** Catherine L. Sorace	Pennsylvania Association of Professional Soil Scientists
►**Robert T. Wood** William McLaughlin	Pennsylvania Association of Realtors
►**Chris Wood** ►Kevin Bitz	Pennsylvania Association of Sewage Enforcement Officers
Eugene E. Dice, Esq. ►Andrew T. Bockis	Pennsylvania Bar Association
John Gigliotti ►Grant Gulibon	Pennsylvania Builders Association
Eric R. Conrad, P.G. John Walliser, Esq.	Pennsylvania Environmental Council, Inc.
Keith Klingler (no alternate)	Pennsylvania Land Owners Association, Inc.
Anita Stabile Steven Hann	Pennsylvania Municipal Authorities Association
Charles R. Waddy Gregory A. Marshall	Pennsylvania Onsite Wastewater Recycling Association
Mourice G. Waltz ►Eugene Briggs, AICP	Pennsylvania Planning Association
Bruce E. Fox ►Jeff Rachlin	Pennsylvania Septage Management Association
Brian L. Book, P.E. John G. Fuehrer, II, P.E.	Pennsylvania Society of Professional Engineers
►**Dan O'Connell** Thomas Klaum	Pennsylvania State Association of Boroughs
► **Comm. Ginnie Anderson Kane** Comm. Frank Linn	Pennsylvania Association of Township Commissioners

Andrew J. Boni James Wheeler	Pennsylvania State Association of Township Supervisors
► **Duane E. Mowery** Alison J. Shuler	Pennsylvania Water Environment Association
►**Dr. Patrick Drohan** Dr. Henry Lin	The Pennsylvania State University
John Williams Susanne Gantz	USDA Rural Development Mission Area
Organization internal policy no longer allows participation	US Department of Housing and Urban Development
Organization currently no longer functioning	Pennsylvania Environmental Health Association
Other attendees:	
Sue Ahern	Evans Mill Environmental
Karen Atkinson	PSATS
Katie Blansett	PHRC, Penn State
Lori Books	Lebanon County Planning
Larry Earney	Atlantic Solutions
Brad Hengst	POWRA
Scott Houser	POWRA
William Jayne	Borough of Chambersburg
Cynthia Lee	The Wells Team
Mark Mills	Soil Resources, Ltd.
Gordie Sheetz	Lebanon County Planning
Joseph Valentine	PSMA
DEP Representatives:	
Patricia Allen	Director, Policy Office
Doug Brennan	Director, Regulatory Counsel
Kim Childe	Attorney, Regulatory Counsel

John Diehl	Chief, Act 537 Management Section, Division of Planning and Permits, Bureau of Point and Non-Point Source Management (BPNSM)
Karen Fenchak	WPS, Act 537 Management Section, BPNSM
Kristin Furlan	Attorney, Regulatory Counsel
Ron Furlan	Environmental Program Manager, BPNSM
Sean Gimbel	Executive Policy Specialist, DEP Office of Policy and Communication
Nick Hong	EES, Act 537 Management Section, BPNSM
Jason Oyler	Attorney, Regulatory Counsel
Kristin Schlauderaff	Water Plant Biologist, Water Quality Standards, BPNSM
Thomas Starosta	Environmental Engineer Consultant, BPNSM
Lee McDonnell	Director, BPNSM
Janice Vollero	WPS, Act 537 Management Section, BPNSM
Tim Wagner	Sewage Planning Supervisor, SCRO

Call to Order

Due to the absence of both the Chairman and Vice-Chair of the Sewage Advisory Committee, Duane Mowery was nominated by the committee to serve as Acting Chairman for the February 8, 2013 meeting.

The meeting was called to order by Duane Mowery at 10:36 am in Room 105 of the Rachel Carson State Office Building. Meeting sign-in sheets were circulated and a quorum was present.

Old Business

Approval of the minutes of the Meeting of July 11, 2012

The Committee approved the minutes of the Meeting of July 11, 2012 without changes.

Compliance with 25 Pa. Code Section 102.43

When a permit for earth disturbance activities is required under the Chapter 102 Erosion and Sediment Control regulations (typically when more than one acre will be disturbed), Section 102.43 requires that the earth disturbance permit be obtained before other local permits or approvals for the activity are issued. Under this provision, an applicant for an onlot sewage disposal system who is required to obtain a Chapter 102 earth disturbance permit would need to

obtain the earth disturbance permit before submitting an application to a sewage enforcement officer (SEO) for an onlot sewage disposal system.

The onlot sewage disposal system permit application has been amended to include the following two check boxes:

- Permit or coverage under Chapter 102 Erosion and Sedimentation Control required
- Permit or coverage under Chapter 102 Erosion and Sedimentation Control obtained

Questions posed by the committee included:

- Is it the applicant's responsibility or the SEO's responsibility to complete the Chapter 102 check boxes on the form?
- Can an SEO withhold issuing a permit for an onlot system if the applicant has not addressed the Chapter 102 requirements?
- Many of DEP guidance documents include instructions on how to complete forms. Is it possible to include a set of instructions that accompanies the permit application to detail how the Chapter 102 requirements should be enforced?

When these items have been resolved, the Department intends to notify the SEOs through a letter to all SEOs or through an announcement on the Department's website under SEO News that advises that any required Chapter 102 earth disturbance permits should be obtained prior to issuance of an onlot sewage disposal system permit.

The Committee moved to defer further discussion of the Chapter 102 requirements to the next advisory committee meeting that has been scheduled for March 6, 2013.

Transfer of Alternate Systems Guidance (ASG) contents to DEP website

The transfer of the alternate technologies listings to the website has been delayed due to efforts by the Department to resolve a number of technical issues. One of those key technical issues is addressing the disinfection of fecal coliforms when an onlot system is sited on shallow limiting zones.

New Business

Proposed Future Meeting Dates

The advisory committee meeting scheduled for February 8, 2013 was a special meeting that was advertised in the PA Bulletin to comply with the Sunshine Law.

The regular advisory committee meeting dates for 2013 are as follows:

- March 6, 2013
- July 10, 2013
- November 6, 2013

The meeting dates have already been published in the PA Bulletin.

Nominations for 2013- 2015

In accordance with Section 4 of the Pennsylvania Sewage Facilities Act, members of the Sewage Advisory Committee must be appointed by the Secretary of the Department of Environmental Protection every two (2) years. Typically, each organization has a total of two representatives comprised of one member and one alternate.

As of February 4, 2013, the following organizations have not submitted nominations for the April 1, 2013 to March 31, 2015 term:

- PA Builders Association
- PA Environmental Council
- PA Landowners Association
- PA Municipal Authorities Association

DEP will make additional attempts to contact these organizations to inform them that their nominations are outstanding.

Establish Committee to Nominate SAC Chairman

Duane Mowery appointed Ralph DeFazio, Jeff Rachlin, and John Wagman to solicit nominations to elect a Chairperson and Vice-Chairperson for the April 1, 2013 to March 31, 2015 term.

Presentation of Draft Technical Guidance: "Sewage Facilities Planning Module Review for Onlot Sewage Systems Proposed in High Quality and Exceptional Value Watersheds". Herein referred to as the "guidance document."

Lee McDonnell, Director of Point and Non-Point Source Management, introduced to the committee a new guidance document that addresses siting onlot systems in special protection watersheds. The objective of the guidance document is to assure compliance with Chapter 93 antidegradation regulations which require that water quality in special protection watersheds be protected and maintained.

The guidance document recommends cost-effective and reasonable best management practices (BMPs) to maintain and protect water quality when reviewing sewage facilities planning modules for proposed individual or community onlot sewage systems in high quality (HQ) and exceptional value (EV) watersheds.

The Department stressed that the Chapter 93 antidegradation regulations require the control of nonpoint sources such as septic systems through cost-effective and reasonable BMPs.

In the *Pine Creek Watershed Assoc. v. DEP* case, DEP approved the use of septic systems in a small residential development in an EV watershed (Pine Creek in Berks County). The approval was appealed to the Environmental Hearing Board (EHB) on the basis that water quality in Pine Creek would not be properly maintained and protected under the Chapter 93 antidegradation requirements. DEP relied primarily on a groundwater plume analysis using a model developed to design constructed wetlands to assert that nitrate would not reach the creek because the natural wetland present on the site would effectively remove the nitrate.

The EHB ruled in November 2011 that the wetland model relied upon by DEP was not adequate to demonstrate that the nitrate-nitrogen would be at a concentration below background when it reaches the nearby creek. The modeling was part of an instream analysis typically used for point source discharges rather than the BMP approach appropriate for nonpoint sources. As a result of the EHB decisions, DEP's approval of the plan was rescinded and DEP was required to pay the watershed group's attorney fees.

The *Pine Creek* decision establishes a legal and scientific standard that is extremely difficult to meet; thereby, jeopardizing any future development using septic systems in HQ and EV watersheds.

In response to the outcome of the EHB decision, the Department reviewed the regulatory standard that applies. As per Chapter 93, the most fundamental requirement is that "water quality be maintained and protected," and that for nonpoint sources, "cost-effective and reasonable best management practices for nonpoint source control" will be achieved. Accordingly, the Department researched the use of BMPs with nitrate removal efficiencies established through scientific research and produced this new guidance document for use in the preparation of sewage facilities planning modules proposing individual or community onlot sewage disposal systems in HQ and EV watersheds consistent with the Chapter 93 antidegradation requirements.

The guidance recommends the following BMPs and provides protection factors based on nitrate removal that can be used to determine the appropriate combination of practices to protect and maintain stream water quality:

- Onlot System Density;
- Setback Distance;
- Riparian Buffers;
- Permeable Reactive Barrier (PRB);
- Nitrogen Reduction Onlot Systems.

The use of the BMP approach recommended in the guidance may require municipalities to implement a more active sewage management program to ensure proper maintenance of the onlot system. In the case of riparian buffer BMPs, the riparian buffer would need to remain as part of the subdivision permanently and not be removed.

Permeable reactive barriers are an emerging technology that provide a source of carbon to remove the nitrogen and can be effective for the life of the onlot system.

For nitrogen reduction onlot systems, at least 50% of the total nitrogen would be required to be removed. However, this BMP requires more active operation and maintenance than a conventional onlot system.

DEP has implemented the BMP approach for other nonpoint sources such as agricultural operations, general construction/land development, timber harvesting, resource extraction and waste management, but has not developed BMPs for onlot systems to maintain and protect water quality in HQ and EV watersheds. DEP is now doing so through this guidance document.

Those streams that are considered special protection watersheds are listed in Chapter 93, and are available electronically through the Department's EMapPA website (http://www.emappa.dep.state.pa.us/emappa/viewer.htm).

The Department indicated that the current mechanism for reviewing sewage facilities planning modules for onlot systems in HQ/EV watershed for consistency with the antidegradation regulations is on a case-by-case basis. Acceptable applications are those where the applicant demonstrates that nitrate from the proposed onlot systems will be adequately reduced to protect and maintain water quality in the EV/HQ watersheds.

Questions from the Committee:

Question #1: Does the Department intend on placing the guidance document for public comment?

DEP Response: Yes, the Department plans to provide public notice of the guidance document and seek public comments.

Question #2: Is there any evidence that nitrate from non-point sources will increase the nitrate levels in watersheds?

DEP Response: As discussed in the EHB's decision, nitrate from septic systems has the potential to reach groundwater and, in some cases, reach streams. As a result of the EHB's decision, the Department has recognized that septic systems should be controlled as nonpoint sources rather than point source discharges consistent with the anti-degradation requirement established in Chapter 93.

Question #3: Should the guidance document address all watersheds rather than only special protection watersheds?

DEP Response: The requirement to protect and maintain water quality from degradation applies only in HQ and EV watersheds. For all other watersheds, the existing uses are protected through applicable water quality standard.

Question #4: Does the Department have any data that the riparian forest buffers in Chapter 102 will resolve the nitrate issue? In particular, was the 150 foot buffer rule extracted from Chapter 102 or was there an ancillary reason for the 150 foot distance?

DEP Response: There are numerous studies designed to quantify removal of surface and subsurface nitrate. Based on these studies, DEP has determined that a buffer width of 150 feet is sufficient to minimize the impacts of the nitrate.

Question #5: With permeable reactor barriers (PRB), how does the Department intend on verifying that the PRB has been sited below the seasonally low water table?

DEP Response: The Department intends on using the judgment of the applicant's and the Department's geologist/soil scientist to reasonably conclude that the PRB will intercept the groundwater influenced by septic effluent.

Question #6: Are the PRBs permanent or do they require periodic maintenance?

DEP Response: The technology is emerging with relatively few studies performed thus far. However, all initial indications are positive regarding the efficacy and long-term persistence of PRBs when properly designed and installed. EPA has recommended the use of PRBs for nitrate minimization in Chesapeake Bay planning. The PRB can involve digging a trench and installing a persistent carbon source (e.g. wood chips). Stoichiometric calculations indicate that the PRB carbon source should last the lifetime of an absorption area, but actual experience has been limited to only about 15 years thus far.

Question #7: Did the Department examine the socioeconomic impacts that the guidance document may cause? Please understand that with a standard conventional sand mound, it may cost about $15,000. With the addition of PRB, this will only add to the cost which could possibly make it unaffordable for the homeowner.

DEP Response: The Department considered the cost-effectiveness of the recommended BMPs when developing the guidance and has included available cost information in the guidance.

Question #8: The guidance document has many references to many documents to arrive at the Department's positions. For those references that had contrary approaches, were those opinions considered?

DEP Response: Few studies or responsible organizations would argue that the recommended BMPs are not effective in reducing nitrate loading to surface waters. When reviewing ranges for nitrate removal efficiencies for riparian buffers, the Department encountered a wide range of numbers. The Department generally used the mean or median of those values found in the literature or in some cases used accepted values by other regulatory agencies, such as EPA.

Question #9: The Northeast Region has many special protection watersheds. Regulatory agencies collect water samples on a regular basis. The data collected and reviewed has indicated that nitrate is essentially non detectable. If there is no data to support that there is a problem with nitrate, why implement a policy/regulation that may be burdensome when it may not be needed? Is it possible to put in place a regulation or law that would overturn the EHB hearing since there may not be data to support that there is a problem with nitrate.

DEP Response: In response to the EHB decision, the Department decided that the most expedient path forward to comply with the antidegradation regulations for special protection watersheds was through the guidance document. Passage of policies takes months while regulations make take several years. Enactment of a legislative change is beyond the control of the Department.

Question #10: In the guidance document on page 13, the guidance document states the following: "For the purpose of hydrogeologic evaluation, DEP estimates the average amount of sewage generated by a septic system is 262.5 gpd." The use of water saving devices such as low flow toilets have reduced the 262.5 gpd by 1-2% per year for about the last 5 years. Is the 262.5 gpd an accurate flow rate that should be continued to be used?

DEP Response:

Since the 262.5 gpd is a value established in the regulations, adjustment to the 262.5 gpd may only occur with an amendatory rulemaking. The regulations do provide an option that would allow for a numerical value other than the 262.5 gpd provided that data is available to support the revised flow rate. When utilizing the guidance document, an adjustment to the 262.5 gpd could increase the protection factor credit.

Miscellaneous Items Discussed by the Committee and DEP

A member of the public requested that the data for the modeling used in the *Pine Creek* case be distributed to the committee members for further review.

The Department recommended that individuals read the entire EHB decision as the discussion during the presentation is an abbreviated paraphrasing of the EHB case.

The Committee recommends that cost effectiveness be considered as the forefront when considering solutions.

Subsequent to finalizing the guidance document, the Department intends to amend the regulations (i.e. Chapters 71, 72, and 73) to make the BMP approach enforceable. With regard to other changes to Chapters 71, 72, and 73, the Department intends to focus on those revisions needed to support the BMP-based approach and a few select other revisions to the regulations which will be announced at a future SAC meeting. Previous attempts to adopt Chapter 71a, 72a, and 73a, which completely redrafted the current chapters, were side-tracked by some of the controversial changes that were proposed.

The Committee would like to convene as a subcommittee to review the guidance document. The Committee has requested that they have additional time to submit a formal set of comments from the SAC to the Department.

The Committee has some question on whether the BMPs described in the guidance document are a viable solution to address the Chapter 93 requirement that special protection watersheds be protected and maintained. The Committee was encouraged to submit comments to address their concerns to the guidance document.

The Committee encouraged that comments be submitted either through SAC or individually.

The Committee was acceptable to receiving SAC information through email.

Public Comments Concerning Committee Business

A member of the public inquired if individual residential spray irrigation systems (IRSIS) were an option available in the guidance document. The Department indicated that IRSIS is not included in the guidance document. This option will be further considered for inclusion.

A member of the public inquired as to whether the calculations should be in pounds per year rather than by concentration (i.e. mg/l).

A member of the public inquired whether the guidance document is being utilized by the regional offices. The Department responded by indicating that the guidance document is not being currently used by the regional offices. Applications are being evaluated on a case-by-case basis with the burden on the applicant to demonstrate that impacts to the groundwater and surface are addressed.

A member of the public inquired whether older tanks that are in need of replacement due to malfunction would need to comply with the guidance document. The Department responded that malfunctioning systems present a different set of issues and the guidance has not been developed for the purpose of addressing malfunctioning systems.

Meeting Ending

The meeting was adjourned at 12:25 pm.