

WATER RESOURCES TECHNICAL COMMITTEE (WRTC) MEETING

Thursday, September 10, 2009

(12:30 to 2:00 p.m.)

Board Room, 3rd Floor

Note: Working lunch will be provided at 12:00 p.m.

AGENDA - WRTC Members' Meeting

Meeting Materials

- Draft COG Septic System Policy
- Draft letter from CBPC to Senator Cardin (same as previously distributed)

I. WIPs Roundtable Debriefing – Ted Graham and other COG Air and Water staff (12:30 - 1:10 p.m.)

Dr. Graham will summarize key issues and concerns that were identified. COG staff will note key differences and critical elements between the region's Clean Air Act SIPs and other regional planning efforts that the region may wish to consider incorporating into the Watershed Implementation Plans (WIPs) as they are being developed.

Feedback: The WRTC will be asked to:

1. Identify information needs and/or concerns to formally communicate to the States and/or EPA concerning the development of the Bay TMDL and proposed WIPs; and
2. Provide any recommendations to the CBPC concerning regional coordination in the development of these WIPs.

II. General Updates – COG Staff

(1:10 p.m.-1:30 p.m.)

The issues below will be discussed in-person. Additional topics and events are covered in the "Future Meetings/Events and General Updates" Document.

A. COG's Community Engagement Campaign -Samantha Villegas, Loudoun Water, Community Engagement Campaign Chair (via conference phone)

(1:10 – 1:20 p.m.)

Reference – General Updates - Item G

Feedback: The WRTC will be asked to provide feedback on the focus and elements of the Community Engagement Campaign strategies.

B. COG's Septic System Policy - WRTC Input on Recommendations to CBPC - Karl Berger

(1:20 – 1:30 p.m.)

The CBPC discussed Maryland's new policy, requiring the owners of all new or replacement septic systems in the state's "Critical Areas" to install nitrogen removal technology, and the attendant situation in Virginia. The CBPC then directed staff to draft a recommended COG policy on future septic system legislation. The recommended policy is attached.

Meeting Material: Draft COG Septic System Policy

Feedback: The WRTC will be asked to review staff's draft septic system policy and provide recommendations to the CBPC.

III. Federal Legislation Updates

(1:30 -1:45 p.m.)

A. Senate Reauthorization of Chesapeake Bay Bill - Steve Bieber, COG Staff

Reference – General Updates-Item I

B. Inform WRTC about CBPC Action Pertaining to Congressman Connolly's Proposed Federal Stormwater Legislation – Karl Berger, COG staff

Meeting Material: Draft letter to Senator Cardin (same as previously distributed)

Feedback: Receive information and provide any requests for further information on either topic.

IV. Around the Room – WRTC Members

(1:45 - 1:55 p.m.)

Feedback: WRTC members will be asked to note any particular activities, items of interest or concern or water resource events that they believe would be of interest to the other members.

V. Next Meeting Dates:

(1:55 p.m.)

The **CBPC** meets on **September 18th**; while the **WRTC** is scheduled to meet on **November 12th**.

It is recommended that the **WRTC also meet on October 6th or 9th** - for a special session to specifically address **Load Allocation developments** and the potential implications/impacts on COG's members (i.e., after the September 29th-30th WQGIT meeting, but before the October 22nd PSC meeting).

Feedback: The WRTC will be asked to confirm their next meeting dates.

VI. Adjourn

(2:00 p.m.)

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WRTC Meeting
September 10, 2009
Future Meetings/Events

September 14th - 17th – VWEA & Va. Sect. AWWA Joint Annual Meeting - WaterJAM 2009, Richmond, VA

September 18th –CBPC Meeting-Proposed Agenda items:

- Local Governments' Role in Managing Stormwater- Hedrick Belin, Potomac Conservancy
- Bay TMDL WIP Report from WRTC Roundtable Discussion
- Review of Plastic Bag Report
- Discussion of Septics Policy
- Update on Federal Stormwater Legislation

September 21-22 – EPA Region 3 Workshop: Preventing, Detecting and Responding to Drinking Water Contamination Events.

October 9th (To Be Confirmed)-WRTC Special session to provide local review/comments regarding draft load allocations, resulting from the September WQGIT meeting, prior to the October PSC Committee meeting.

October 9th-11th – 2009 Chesapeake Watershed Forum, Alliance for the Chesapeake Bay-Shepherdstown, WV

October 10th – 14th – WEFTEC 2009, Orlando, Florida

November 4th-American Academy of Environmental Engineers Workshop entitled “Chesapeake Bay, Progress to-date and Future Efforts”

November 5th - COG's Roads and Highways Stormwater Symposium

November 7-11th - American Public Health Assoc. Annual Meeting w/ focus on Water-Philadelphia

November 9th – COG Workshop: Linking Conservation and Transportation Planning in Washington, DC

November 12th – WRTC meeting

November 13th – COG Wastewater Climate Change-Greenhouse Gas Inventory Workshop

November (TBD) – RMS Webinar Meeting

November 20 – CBPC meeting

General Updates

Events

A. EPA Region 3 Workshop: Preventing, Detecting and Responding to Drinking Water Contamination Events, September 21-22, 2009.

Workshop objectives:

- Give participants an understanding of current approaches for preventing, detecting, and responding to drinking water contamination;
- Describe guidance, tools, and other resources that participants may use for assistance in deploying contamination warning system components and systems; and
- Receive feedback from participants regarding future guidance and tools that would help utilities with implementing contamination warning systems.

This workshop will be held at COG. See link below for more information and to register. Registration is required.

http://www.mwcog.org/calendar/detail.asp?EVENT_ID=5755&MONTH_CHOICE=9&DAY_CHOICE=21&YEAR_CHOICE=2009

COG Staff Contact: Steve Bieber sbieber@mwcog.org / (202) 962-3219

B. 2009 Chesapeake Watershed Forum, Alliance for Chesapeake Bay, Shepherdstown, WV, October 9-11, 2009

The Chesapeake Watershed Forum is an annual conference for watershed organizations and local government officials from around the multi-state Chesapeake Bay region. It is an opportunity to learn the latest scientific techniques in Bay restoration and protection, address specific organizational capacity building needs, focus on regional and watershed-wide needs, network with other watershed organizations, and enjoy the beauty of the watershed.

For more information and registration: <http://www.acb-online.org/project.cfm?vid=342>

C. American Academy of Environmental Engineers (AAEE) Workshop entitled “Chesapeake Bay, Progress to-date and Future Efforts” - November 4, 2009

The AAEE will be holding a regional event on November 4th to address Chesapeake Bay issues. The purposes for the event are to provide training on a relevant issue and to let non-members know about the opportunities the Academy provides. The target audience is the environmental engineering community. The ½-day workshop will include several invited speakers, will be held at COG, and there will be a charge for attendees. There may also be sponsorships for student attendance. Once details have been confirmed for the event a flyer will be distributed. COG staff will share that information once it becomes available.

COG staff contact: Ted Graham tgraham@mwkog.org / (202) 962-3352

D. COG’s Wastewater Climate Change Greenhouse Gas Inventory Workshop - November 13, 2009

A one-day workshop that will focus primarily on wastewater plants, but given the large electrical use and inventory impacts, may also involve representatives to address drinking water treatment and collection/distribution system contributions. The workshop will be informational and provide background to help us address “*How should we incorporate the results from local initiatives and analysis into the baseline and/or the reduction efforts to ensure that the COG region meets its 2012 / 2020 / 2050 reduction goals and that our local governments and agencies get credit for all of their efforts?*”

Workshop scope intended to address the following key points:

1. What are the current COG-region assumptions/estimates for these sectors’ loads?
2. What are the results of local facility GHG inventories and what methodologies were used?
3. What sort of energy recovery/green energy techniques, etc. have/will COG's wastewater/drinking water members used to offset their carbon footprint?
4. What sort of national information is available about conducting inventories/quantifying emissions that might be helpful to COG’s members?

As appropriate, follow-up workshop(s) or other activities will be organized. In addition, the findings from this workshop will be shared with COG's Climate, Energy and Environment Policy Committee (CEEPC)- which is the lead committee addressing these issues for the COG region.

COG staff contact: Tanya Spano tspano@mwkog.org / (202) 962-3776

COG Activities

E. Plastic Bag Report Update – COG staff has prepared a draft report addressing COG Board Resolution R19-09. The resolution directs the committee, in concert with various technical committees, to survey the effectiveness of measures taken elsewhere to reduce the incidence of such pollution, to review data on the incidence of such pollution locally and to analyze the effectiveness of any existing local recycling programs that address this issue. The draft report will be presented to the CBPC at its Sept. 18 meeting.

COG staff contact: Karl Berger kberger@mwkog.org / (202) 962- 3350

F. COG’s Climate, Energy and Environment Committee Activities

This Committee held its inaugural meeting on July 22, 2009. Under the direction of Chairman Jay Fiset and COG’s DEP Director, Stuart Freudberg, the committee has agreed to develop a work plan with specific goals and timelines for achieving or exceeding regional emissions reduction targets, established in the 2008 National Capital Region Climate Change Report. The committee plans to work closely with other COG technical committees, including the National Capital Region Transportation Planning Board (TPB) and the Metropolitan Washington Air Quality Committee (MWAQC). This committee meets on the fourth Wednesday of every other month. Please see web link for further details: <http://www.mwkog.org/uploads/pub-documents/zldXXg20081203113034.pdf>

In addition, COG held a **Climate Adaptation Workshop** on July 23. An overview and presentations may be accessed on the COG website: http://www.mwkog.org/news/press/detail.asp?NEWS_ID=394

COG Staff Contact: Stuart Freudberg sfreudberg@mwkog.org / (202) 962-3340

G. COG's Community Engagement Campaign (CEC)

The purpose of the CEC is to have a united voice, from the region's utilities, on key issues pertaining to water and wastewater affecting the region. Workgroup members met in July to determine which key issues they would like to address over the coming year and the format for the messages. Thus far, the CEC has determined they would like to develop a web-based format for informing the public about key regional messages pertaining to: Wise Water Use; investment in infrastructure; drinking water quality, and keeping fats, oils, and grease from being poured directly down the drain. The web-based format would allow for expansion of the message types, and add additional information as well as targeted web ads to direct the public to the [future] web page.

COG staff contact: Heidi Bonnaffon hbonnaffon@mwkog.org / (202) 962-3216

Legislative

H. Stormwater Regulations - Virginia DCR is currently meeting with a group of stakeholders including local governments to revise key provisions of its proposed statewide stormwater management regulations. The state's Soil and Water Conservation Board will hold a public comment meeting Sept. 17 and hopes to take final board action at its meeting on October 6.

COG staff contact: Karl Berger kberger@mwkog.org / (202) 962-3350

I. Chesapeake Bay Program

1) Chesapeake Bay Accountability and Recovery Act of 2009

Bill No.: H.R. 1053 now H.AMDT.36 (A009)

Amends: [H.R.1262](#)

Sponsor: [Rep Wittman, Robert J.](#) [VA-1] (offered 3/12/2009)

Amendment Description:

Amendment requires the OMB Director to submit to Congress a financial report containing an interagency crosscut budget for restoration activities that protect, conserve, or restore water quality in the Chesapeake Bay watershed. In addition, the EPA Administrator would be required to develop and update an adaptive management plan for Chesapeake Bay restoration activities.

Status: Amendment agreed to by voice vote on 3/12/2009

2) Chesapeake Bay Program Reauthorization (CWA §117)

On Monday, August 3, 2009, the Subcommittee on Water and Wildlife, chaired by Senator Cardin, held a hearing entitled, "A Renewed Commitment to Protecting the Chesapeake Bay: Reauthorizing the Chesapeake Bay Program." A draft reauthorization bill is expected to be available in September 2009. Copies of testimony from the August 3rd hearing can be found here: <http://tiny.cc/ezo0V>

3) Clean Water Act Amendment - to reduce pollution resulting from impervious surfaces within the Chesapeake Bay watershed

Bill No.: H.R. 3265

Sponsor: [Rep Connolly, Gerald E. "Gerry"](#) [VA-11] (introduced 7/20/2009) [Cosponsors](#) (3)

This is a bill regarding federal stormwater management legislation that is being introduced by Rep. Gerald Connolly of Virginia's 11th Congressional District. COG staff has previously solicited comment on the draft language of this bill from members of COG's Water Resources Technical Committee. WRTC co-chair Uwe Kirste and members of COG staff met with staff from Connolly's office as well as from Maryland Senator Benjamin Cardin's office on July 30 to relay those comments.

COG Staff Contact: Steve Bieber sbieber@mwkog.org / (202) 962-3219

WRTC Meeting – September 10, 2009

Meeting Material: Proposed COG policy regarding statewide legislative initiatives on septic systems

DRAFT

Att. x for CBPC meeting of Sept. 18, 2009

Prepared by COG staff
Sept. 1, 2009

Overall policy

COG should support state legislative initiatives that call for all new construction using on-site sewage disposal system (septic systems) in the Chesapeake Bay watershed to employ nitrogen reduction technology.

Legislative History

In 2009, the Maryland General Assembly passed SB 554 / HB 176, the “Chesapeake Bay Nitrogen Reduction Act of 2009,” requiring owners of any new or replacement septic systems within Maryland’s “Critical Area” zone to use “best available technology” for reducing nitrogen. The act authorizes the Maryland Department of the Environment (MDE) to assist home owners in paying the difference between the cost of a conventional system and the cost of a nitrogen-removing system using available monies from the Chesapeake Bay Restoration Fund. It also provides for a tax credit on state income taxes.

The original legislation had called for this requirement to be imposed statewide, but it was scaled back during the legislative process to apply just to the Critical Area, which takes in all land within 1,000 feet of tidal waters.

The issue was discussed in the Virginia General Assembly in 2009, along with a number of other septic system issues related to performance requirements and state-versus-local responsibilities. The General Assembly approved SB 1509, which authorizes (but doesn’t require) the Board of Health to set nitrogen-reducing performance standards for alternative onsite sewage systems and clarifies that the Department of Conservation and Recreation can provide grants to home owners for the installation of such systems using the state’s Water Quality Improvement Fund.

Alternative systems are typically employed to meet performance standards in areas where conventional systems cannot do so because of the soil and other site conditions. According to Virginia Department of Health (VDH) officials, they account for about 10 percent of all new systems on a statewide basis. The Potomac Watershed Roundtable, to which a number of COG members belong, had called for the state to establish a nitrogen reduction standard for all new systems.

Impact on the Bay

The Chesapeake Bay Program estimates that septic systems deliver about 15 million pounds of nitrogen a year, or 4.5 % of the total annual load of nitrogen to the Bay. However, the load from septic systems is one of the few source categories that has continued to increase in recent years. Maryland Department of Planning data for the period 2003 – 2007, before the recession occurred, suggests that the percentage of all new single-family houses built with septic systems was increasing, despite a variety of state initiatives for more compact development. Similar data from Virginia was unavailable, but it is likely the state experienced the same trend. (*See Table 1 at the end of this document for septic system numbers within the COG region.*)

The Bay Program's watershed model estimates that a conventional septic system serving a typically-sized family contributes an average of 12.2 pounds/system/year to the Bay. On average, nitrogen reduction systems achieve about a 50-percent efficiency, reducing the average system's delivered load to 6.1 pounds per system per year. The same wastewater flow, if hooked into a municipal sewer system and treated by the enhanced nutrient removal technology being installed by wastewater treatment plants in the region, would only deliver a load of about 2.3 pounds/year.

Cost Issues

The cost of such systems varies based on the technology employed and other factors. MDE estimates the average installation cost at \$13,000 for an enhanced system and about \$6,000 for a conventional system. Other estimates are higher. Enhanced systems also have annual maintenance requirements and operating costs (for electricity) between \$100 – 200/year.

On a cost-per-pound basis, these systems are among the least cost effective practices tracked by the Bay Program. Over a 20-year lifetime, the nitrogen-removing systems would average about \$130 - 150 per pound of nitrogen saved. By comparison, cost efficiency estimates for enhanced nutrient removal at wastewater treatment plants and for a number of agricultural "best management practices" (BMPs) are in a range from \$4 – 10/pound.

Current water quality funding initiatives will not support grant funding for this practice at current levels.

- In Maryland, revenues collected from septic system owners through the so-called flush tax are split between paying farmers to install cover crops and helping to defray the cost of installing nitrogen-reducing septic systems. Up till now, the option of installing such a system has been voluntary and grant funds typically have paid the full differential between enhanced and conventional systems. However, in the wake of the new legislative mandate, MDE plans to focus most of its funding on systems in the Critical Area and may pay less than the full differential. At its current level, the Bay Restoration Fund can fully fund 600 enhanced systems per year. In 2008, there were about 4,000 new and replacement systems installed statewide, according to MDE.
- Virginia currently does not have a dedicated source of funding for septic upgrades. As noted, SB 1509 authorized use of the state's Water Quality Improvement Fund for this purpose, but the fund is undercapitalized to meet existing needs, which include cost share payments for wastewater treatment plant upgrades and agricultural BMPs. VDH officials estimate there were about 21,000 new or replacement systems installed annually on a statewide basis in recent years.

Other Potential Issues

- Nitrogen-reducing systems require more maintenance than conventional systems to operate properly. Typically, inspections, filter replacement and other tasks are performed at least annually. Some of the grant agreements in Maryland have covered the cost of maintenance for a period of time or have required the system owners to provide for maintenance as a condition of the grant. But it is not clear how these arrangements will work on a long-term basis nor what happens if systems are installed without grant funding.
- Staff from COG's member governments who currently manage septic system programs in their jurisdictions indicate that implementing such a new requirement will increase programmatic responsibilities and may require more staff.

- Septic system program managers also are concerned about the requirement to install such systems as replacements when a conventional system fails. In testimony before the Maryland General Assembly in 2009, the Maryland Conference of Local Environmental Health Directors opposed this idea because of concern that people would no longer report failures to avoid the cost of installing a nitrogen-removing system.

Recommendation

COG should support state legislative initiatives that call for all new septic systems in the Chesapeake Bay watershed to employ nitrogen reduction technology.

COG staff based its recommendation for COG policy on this issue on the following factors:

- Although targeting just new systems will not reduce the overall amount of nitrogen pollution from septic systems, it will reduce the rate at which this load is increasing.
- The recommendation is not dependent on a funding source for grants. It is assumed that home builders will pass on the increased costs of such systems to those who choose to build in areas outside of existing sewer service. This is one reason not to extend the policy to replacement systems. Although including such systems could begin to reduce overall nitrogen loads from this source, it also would extend the financial burden across a broader spectrum of people. It also could lead to more public health problems from failing systems, as noted by septic system program managers.
- Imposing higher costs on development outside of areas served by sewers can be seen as an incentive for smart growth.

Table 1 Septic system numbers within COG member jurisdictions¹

Jurisdiction	Overall # of residential septic systems	# of new systems annually	# of replacement systems annually
Fairfax	24,000	130 ²	na
Frederick	33,000 ³	225 ⁴	104 ⁴
Loudoun	14,600	800 – 900 ²	25 ²
Montgomery	28,500 ³	200 ²	100 ²
Prince George's	11,700 ³	120 -150 ²	12 ²
Maryland total	420,000	2000 ⁵	2000 ⁵
Virginia total	approx. 1,000,000	18,800 ⁴	2,400 ⁴

¹ These estimates were supplied by state or county officials in the jurisdictions indicated. They reflect different averaging methods and degrees of accuracy.

² estimated multi-year average

³ MD Dept. of Planning data for 2007

⁴ 2004-2008 average

⁵ MDE data for 2008