



February 12, 2009

Honorable Isiah Leggett  
County Executive  
Executive Office Building  
101 Monroe Street, 2nd Floor  
Rockville, MD 20850

Honorable Phil Andrews  
President  
Montgomery County Council  
100 Maryland Avenue  
Rockville, MD 20850

Dear Sirs;

I have the honor of transmitting the Annual Report of the Montgomery County Water Quality Advisory Group. The Report summarizes the Group's activities over the last year and highlights key water quality challenges in the year ahead. As you will see from the Report, the WQAG is a remarkably capable, diverse and hard working advisory group.

The next two years present extraordinary challenges and opportunities in the area of water quality policy here in Montgomery County and throughout the State of Maryland. The members of WQAG are eager to help the Council and Executive respond to the needs of the time in a way that protects our environment and enhances the quality of life for all County residents.

Respectfully submitted,

Larry J. Silverman

---

# Water Quality Advisory Group

## January 2009

---

Edward Brandt  
3302 Cummings Lane  
Chevy Chase, MD 20815  
w: (703) 308-8699; h:(301) 657-4657  
[edbrandt@atlantech.net](mailto:edbrandt@atlantech.net)  
*Public-at-large (1st full term, expires 5/11)*

Jill Coutts  
Forest Oak Middle School  
651 Saybrooke Oaks Blvd  
Gaithersburg, MD 20877  
w: (301) 670-8242  
[Jill\\_coutts@mcpsmd.org](mailto:Jill_coutts@mcpsmd.org)  
*Scientific/academic (2nd term, expires 5/09)*

Martin Chandler  
WSSC, Environmental Group  
14501 Sweitzer Lane  
Laurel, MD 20707  
w: 301-206-8052; fax 301-206-8057  
[mchandi@wsscwater.com](mailto:mchandi@wsscwater.com)  
*Public agency, WSSC (1st term, expires 5/10)*

Ms. Meosotis Curtis  
Department of Environmental Protection  
255 Rockville Pike, #120  
Rockville, MD 20850  
w 240-777-7711; f 240-777-7715  
[meosotis.curtis@montgomerycountymd.gov](mailto:meosotis.curtis@montgomerycountymd.gov)  
*Public agency, DEP (2nd term, expires 5/10)*

Richard V. Ducey  
9117 Kirkdale Road  
Bethesda, MD 20817  
H 301.530.9580; w 703-802-2995  
(h) [rducey@pelagos.net](mailto:rducey@pelagos.net) (w) [rducey@bia.com](mailto:rducey@bia.com)  
*Public-at-large (1st term, expires 5/10)*

Kathleen (Kay) Fulcomer  
6617 Belle Chase Court  
Laytonsville, MD 20882  
h: 301-990-7575  
[fulcomek@comcast.net](mailto:fulcomek@comcast.net)  
*Public-at-large (2nd term expires 5/10)*

Erica Goldman  
9706 Bristol Avenue  
Silver Spring, MD 20901  
h: 301-588-7428; c: 202-270-0041  
[erica\\_goldman@earthlink.net](mailto:erica_goldman@earthlink.net)  
*Scientific and Academic (1st term expires 5/10)*

Daphne Gee-Tone Pee  
9039 Sligo Creek Parkway, #805  
Silver Spring, MD 20901  
W 301.529.2720  
[daphne.pee@gmail.com](mailto:daphne.pee@gmail.com)  
*Public-at-large (1st term, expires 5/11)*

Scott Kauff  
407 Feather Rock Drive  
Rockville, MD 20850  
H 301.340.1088 W 301.881.5900 cell 202.309.0200  
(h) [kauffs@gmail.com](mailto:kauffs@gmail.com) (w) [skauff@lojkd.com](mailto:skauff@lojkd.com)  
*Public-at-large community (2nd term, expires 5/09)*

Carol J Henry, PhD, DART  
6905 Wilson Lane  
Bethesda, MD 20817  
301-229-6193  
[carol.henry1@verizon.net](mailto:carol.henry1@verizon.net)  
*Scientific/Academic (1st term, expires 5/11)*

David C. Plummer  
Montgomery Soil Conservation District  
18410 Muncaster Road  
Derwood, MD 20855  
W 301.590.2855  
[david.plummer@montgomerycountymd.gov](mailto:david.plummer@montgomerycountymd.gov)  
*Agricultural community (2nd term, expires 5/09)*

Douglas Redmond  
M-NCPPC, Parks Department  
1109 Spring St., #800  
Silver Spring, MD 20910  
W: 301-650-4367 fax 301-650-4379  
[doug.redmond@mncppc-mc.org](mailto:doug.redmond@mncppc-mc.org)  
*Public Agency Rep (2nd term, expires 5/10)*

M. Dustin Rood, **Vice-Chair**  
19847 Century Blvd.,  
Suite 200  
Germantown MD 20874  
h 301-471-1338 w 301-948-4700  
[drood@rodgers.com](mailto:drood@rodgers.com)  
*Business Community (2nd term, expires 5/11)*

F. Fred Samadani  
803 Reserve Champion Drive, #201  
Rockville, MD 20850  
w: 410-841-5959 f:  
[SamadaF@mda.state.md.us](mailto:SamadaF@mda.state.md.us) and/or  
[samadani@verizon.net](mailto:samadani@verizon.net)  
*Agicultural Community (1st term, expires 5/10)*

Larry J. Silverman, **Chair**  
7308 Birch Ave.  
Takoma Park, MD 20912  
H 301-495-0746  
[ljoelsilverman@gmail.com](mailto:ljoelsilverman@gmail.com)  
*Environmental (2nd<sup>st</sup> term, expires 5/10)*

Michael Smith  
10817 Bucknell Drive  
Silver Spring, MD 20902  
H: 301-649-1284 w: 202-633-0480;f:  
[mike78smith@hotmail.com](mailto:mike78smith@hotmail.com)  
*Environmental Community (1st term, expires 5/09)*

---

# Water Quality Advisory Group

## January 2009

---

Tanya T. Spano  
4988 Cloister Drive  
North Bethesda MD 20852  
H: (301) 564-3622 W: (202) 962-3776 F: (202) 962-3201  
[tspano@mwkog.org](mailto:tspano@mwkog.org)  
*Environmental Community (1st full term, expires 5/11)*

Eileen Straughan  
15526 Thompson Road  
Silver Spring, MD 20905  
H: 301-236-5259 w:301-362-9200  
[EStraughan@straughanenvironmental.com](mailto:EStraughan@straughanenvironmental.com)  
*Business Community (1st term, expires 5/10)*

---

## WATER QUALITY ADVISORY GROUP

---

- CREATED: Montgomery County Code, Section 19-49, Adopted November 1994
- PURPOSE: To protect, maintain, and restore high-quality chemical, physical, and biological conditions in the waters of the state in the County; reverse past trends of stream deterioration through improved water management practices; maintain physical, chemical, biological and stream habitat conditions in County streams that support aquatic life along with appropriate recreational, water supply, and other water uses; restore County streams damaged by inadequate water management practices, by reestablishing the flow regime, chemistry, physical conditions, and biological diversity of natural stream systems as closely as possible; help fulfill interjurisdictional commitments to restore and maintain the integrity of the Anacostia River, the Potomac River; and the Chesapeake Bay; and promote and support educational and volunteer initiatives that enhance public awareness and increase direct participation in stream stewardship and reduction of water pollution. Recommends to the Executive and the Council by March 1 each year water quality goals, objectives, policies and programs.
- MEMBERSHIP: 18 members, including non-voting representatives of government agencies and up to three representatives each of the public-at-large, academic and scientific experts, environmental groups, the agricultural community, and the business community.
- FINANCIAL DISCLOSURE: Not required.
- TERMS: Three year terms—no compensation.
- MEETINGS: Second Monday night of each month (no meeting in December) at the DEP Offices.
- STAFF: Meosotis C. Curtis, 240-777-7711, DEP [meosotis.curtis@montgomerycountymd.gov](mailto:meosotis.curtis@montgomerycountymd.gov)



**Summary of 2008 Recommendations from the Montgomery County Water Quality  
Advisory Group to the County Executive and County Council**  
February 12, 2009

The Montgomery County Water Quality Advisory Group (WQAG) is divided into three subcommittees

- Technical and Regulatory
- Education and Outreach
- Land Use and Planning

Each subcommittee provides the County Council and County Executive with the following recommendations and input for 2008:

**Technical and Regulatory:** The Technical and Regulatory subcommittee focused its efforts on how the county can best equip itself to meet the expanded requirements of the new stormwater (MS4) permit that will go into effect this year. These new rules require a very strong administrative and planning staff to manage initiatives, plan new ones, and monitor progress. The key will be to maintain management capability even in the face of budget crises.

To that effect, the subcommittee recommends that the County:

1. Maintain planning and administrative funds, so that federal monies can be accessed and administered.
2. Evaluate the structure of the Water Quality Protection Charge. This charge currently serves as a key source of revenue for stormwater management, but it could be enhanced in order to fulfill additional obligations under the expanded MS4 permit.

**Education and Outreach:** This subcommittee looked at two major issues: the role of the schools in water quality and the need to reach out to the wider public with messages vital to achieving water quality goals, particularly in relation to the MS4 permit.

In doing so, WQAG recommends that the County:

1. Build support through a vocal champion and demonstrated stewardship.
2. Target audiences, such as housing groups, business and professional groups, and other constituencies, to enable change.

**WATER QUALITY ADVISORY GROUP**

3. Appoint a Montgomery County Public Schools representative to a regular WQAG position, as recommended by Resolution.
4. Leverage the resources and reach of the County's many excellent non-profit organizations that work with the public on water issues.
5. Set performance measures for public outreach.

**Land Use:** The land use subcommittee focused on the Healthy and Sustainable Communities Initiative, Sustainability Working Group issues, and amendments to the Forest Conservation Law.

WQAG developed a series of recommendations on the Forest Conservation Law, which we shared with Council and the Executive and with the Sustainability Work Group, the Energy and Air Quality Advisory Committee and the Forest Conservation Advisory Committee. WQAG recommends that:

1. Forest and tree policies establish water quality goals and other environmental indicators, and be revisited and evaluated on the basis of the statement of goals and measures.

## **WATER QUALITY ADVISORY GROUP**



**ANNUAL REPORT**  
**Montgomery County Water Quality Advisory Group**  
February 12, 2008

**Executive Summary:**

The Montgomery County ordinance that created the Water Quality Advisory Group (WQAG) requires us to report once a year to the County Executive and Council on our activities and findings. This year's Annual Report weighs especially heavy on the members of WQAG. Many events that will profoundly shape water quality and the quality of life in Montgomery County have been set into motion within the past year.

- The Maryland Department of Environment is on the cusp of issuing a new storm water permit, MS4. This is the most far-reaching and demanding permit ever issued by the State of Maryland to a County government. It may be the toughest storm water permit ever issued in the United States.
- The County's Department of the Environment (DEP), as the MS4 permit coordinator, must expand its efforts to engage all County agencies and the general public to comply with Permit requirements and to continue as a local leader in stormwater management and watershed protection.
- New laws direct the County and the M-NCPPC to integrate a water resource element into all planning and zoning decisions, *in a way that has never been done before*.
- The Environmental Protection Agency and the Bay states are developing Total Maximum Daily Loads (TMDLs) for nutrients and sediments for the Chesapeake Bay and its tributaries. These TMDLs will include 'local allocations' that may have implications for Montgomery County beyond existing legal requirements of the MS4 permit and the State's Water Resources Element legislation.
- The County is poised to adopt a new Road Code and a new Forest Conservation Law, both of which will have great impact on water quality, as well as a suite of policies responding to the climate crisis.
- Land use and development patterns are changing in fundamental ways, presenting new issues and questions.
- Montgomery County government finances face severe constraints.
- Our nation is in economic crisis.
- We have a new President, whose administration is committed to rapid funding of new infrastructure, especially projects that improve the environment and energy future, and which are ready to go.

Your WQAG, watching this situation unfold, has worked very hard to learn about water quality issues and related programs in the County. A list of meeting topics and guest speakers is attached (see *Attachment D*). In addition to this ambitious public effort, the

Group worked informally through subcommittees, correspondence, and research not formally documented, but important in the formulation of these recommendations. Our single goal has been to prepare to provide you with the best and most informed advice on how you *as elected officials* could respond to the sea changes in our water systems.

WQAG Approach: We divided our Group into three subcommittees:

- Technical and Regulatory
- Education and Outreach
- Land Use and Planning

In addition, WQAG welcomed speakers from the Department of Environmental Protection, Department of Park & Planning, and Washington Suburban Sanitary Commission (WSSC) who discussed their programs, budget, outreach, and process issues with us.

Here is a summary of our findings:

**Technical and Regulatory:** Maintaining water quality and compliance with the laws will require tremendous effort not just from the County but the people of the County, our businesses, and our institutions. The Technical and Regulatory subcommittee focused its efforts on how the county can best equip itself to meet the expanded requirements of the new stormwater (MS4) permit that will go into effect this year. These new rules require a very strong administrative and planning staff to manage initiatives, plan new ones, and monitor progress. Montgomery County has presented ready-to-go projects to the new Congress and Administration that can greatly aid water protection efforts. The key is to maintain management capability even in the face of budget crises (see *Attachment A*). To that effect, the subcommittee recommends that the County:

1. Maintain planning and administrative funds, so that federal monies can be accessed and administered. A cut in planning and administration at this time could be incredibly costly to the County.
2. Evaluate the structure of the Water Quality Protection Charge. This charge currently serves as a key source of revenue for stormwater management, but it could be enhanced in order to fulfill additional obligations under the expanded MS4 permit.

The subcommittee also reviewed the Water Resources Element (WRE), mandated in HB 1141, that must be adopted in the county and municipalities comprehensive plans by October 2009.

**Education and Outreach:** This subcommittee looked at two major issues: the role of the schools in water quality and the need to reach out to the wider public with messages vital to achieving water quality goals, particularly in relation to the MS4 permit.

Schools can play a double role as property owners and managers, as well as educators. The WQAG visited the County's first LEED certified school, Great Seneca Elementary School, and witnessed how the two functions complement each other.

Specific recommendations were developed for the outreach portion of the MS4 permit (see *Attachment B*). The demands of the MS4's outreach goals are many and varied. In order to ensure that these goals are met in a timely and cost-effective manner, the subcommittee recommended that the County implement a targeted public awareness campaign on water quality issues. WQAG recommends that the County:

1. Build support through a vocal champion and demonstrated stewardship.
2. Target audiences, such as housing groups, business and professional groups, and other constituencies, to enable change.
3. Appoint a Montgomery County Public Schools representative to a regular WQAG position, as recommended by Resolution (see *Attachment E*).
4. Leverage the resources and reach of the County's many excellent non-profit organizations that work with the public on water issues.
5. Set performance measures for public outreach.

**Land Use:** The land use subcommittee focused on the Healthy and Sustainable Communities Initiative, Sustainability Working Group issues, and amendments to the Forest Conservation Law. With regard to the goals and indicators embodied in the Healthy and Sustainable Communities Initiative, in particular, stream-by-stream, WQAG evaluated the question of what is the County explicitly trying to achieve. The Montgomery County Water Quality Advisory Group will continue to study water quality indicators that are useful for public policy purposes (see *Attachment C*).

WQAG believes that elected officials can take a lead role in articulating shared assessments of our water resources and shared goals. Attorney General Doug Gansler's tour of Great Seneca Creek is a good model. But much more needs to be done by the Council and the County Executive.

WQAG also developed a series of recommendations on the Forest Conservation Law, which we shared with Council and the Executive and with the Sustainability Work

Group, the Energy and Air Quality Advisory Committee and the Forest Conservation Advisory Committee (see *Attachment F*). Our analysis revealed an increase in forested stream buffers with an overall small loss in total forest cover countywide. The group recommends that:

1. Forest and tree policies establish water quality goals and other environmental indicators, and be revisited and evaluated on the basis of the statement of goals and measures.

**Washington Suburban Sanitary Commission:** A representative of WSSC sits on our group. Earlier in 2008 and at our January 12, 2009 meeting, we heard presentations from the chief financial officer of WSSC. He advised us on the timing of critical budget decisions and made a WSSC presentation of proposed budgets. Members would like to know more about WSSC *leadership, governance, funding, and plans to address the apparent rapid deterioration of the system's pipelines so evident in both Counties this winter.*

Although the WQAG has not taken an official position on the WSSC budget, we did look at the proposed 2010 budgets, which the commission prepared in response to the 9% increase recommended by Montgomery County and the 6% increase in rates recommended by Prince George's. WQAG members were concerned that in either case, WSSC would be compelled to make steep cuts in pipeline inspection, protection and maintenance; the very activities, some of us thought, that should be increased in this period of 1,600 to 2,000 significant breaks annually.

**Future activities:**

- We will continue to work with the Department of Environmental Protection (DEP), supporting their efforts for protection of water quality, and provide recommendation on their resources needs.
- We will follow the WSSC issue very closely, and report back to you as you deliberate WSSC budget.
- We will continue to meet with school representatives and learn more about the work they are doing.
- We will continue to work with other advisory groups. One of our members serves on the Forest Protection advisory group. We have had a joint meeting with the Energy and Air Quality Advisory Committee. Members attend and participate in the Sustainability Work Group, with whom we shared our report on Forests and Trees. We will redouble this effort to develop a wide consensus and present the water quality aspects of issues that we know the Council and Executive will be considering.
- We will continue to recommend outreach investments.
- We will visit stormwater management facilities on the new Montrose Parkway and the Inter County Connector, and report back our impressions of their efficacy.

- We will continue to learn about and evaluate the efforts and resources of executive agencies.

Please consider the WQAG as a resource. The County Executive nominated and the County Council confirmed an outstanding team of water quality advisors. They are not only qualified, they are committed. We welcome visits and agenda recommendations from the Executive and Members of Council. You are the people we are working to provide with the best recommendations that a volunteer citizen board can provide.

*Attachment A*

**Recommendations from the Technical and Regulatory Subcommittee**

**Background:**

The federal Clean Water Act requires that municipal governments who own large and medium storm sewer systems obtain a stormwater permit under the National Pollutant Discharge Elimination System (NPDES) program. MS4 permits – Municipal Separate Storm Sewer System – are issued by the Maryland Department of the Environment (MDE), under authority of state law and as the recipient of delegated federal powers. In a matter of days or weeks, Montgomery County will be issued a new MS4 permit. Montgomery County's new permit is described as a "third generation." It builds on the previous permit but goes much, much further. MS4 permits run for five years. The new permit attempts to regulate how the County moves stormwater into its pipes and how it discharges it to streams, lakes, groundwater and reservoirs. It also requires the County to take steps to reduce the environmental damage done by its stormwater system.

The new permit for Montgomery County sets rigorous goals for pollution reduction and will serve as an important step toward cleaning up local waterways and restoring the Chesapeake Bay.

The MDE will be responsible for evaluating/judging the County's progress toward achieving permit compliance. This permit is also enforceable in federal court by the state, by the US EPA, and by interested citizens.

Major new requirements of the MS4 permit include:

- Doubling the requirement for retrofitting existing developed land with stormwater management practices to 20 percent, in addition to completing the 10 percent requirement in the previous permit, for a restoration goal of 30 percent of impervious surfaces within the five-year permit period. In other words, the drainage systems for a little less than a third of the County's most densely settled areas need to be reconfigured and re-engineered.
- Developing and implementing a trash elimination plan for the Anacostia River to support regional strategies to reduce trash and increase recycling as set forth in the Trash Free Potomac Watershed Initiative 2006 Action Agreement. Permit requirements for Montgomery County's portion of the Anacostia Watershed include establishing a trash pollution baseline within one year after the permit is issued, implementing a trash abatement program, expanding education to citizens, and monitoring efforts to ensure that programs continue to progress toward a trash-free Potomac.

- Restoring impaired waterways by developing County implementation plans to reduce stormwater pollutant loading to levels needed to meet water quality standards (known as Total Maximum Daily Loads).
- Establishing a long-term schedule for completing comprehensive water quality assessments that include identifying sources of pollution and water quality improvement opportunities for all watersheds in the County.
- Assuring that local stormwater management ordinances and regulations and planning and zoning codes allow and promote the implementation of Environmental Site Design (ESD) to the maximum extent practicable.

Building public input and support will be critical to success in achieving all of the above. Targeted audiences, such as builders, will need training and direction. The public at large will also need to change habits and perceptions — including changes in landscaping practices, driveway and roof replacement, oil changes, and many other routine activities. Moreover, the public is entitled to clear and understandable explanations of fee increases in stormwater charges. The Outreach and Education Section contains a further discussion of this issue.

**Cost Implications:**

The expanded provisions required under the new permit have significant cost implications. Funding for permit-required programs since FY03 has ranged from \$10 to \$16 million per year and the permit has been successful in achieving substantive improvements in stormwater management. However, it is clear that what has been accomplished to this point will not be sufficient to achieve compliance with these new permit conditions.

The Department of Environmental Protection (DEP) is currently developing its implementation plan and estimating costs, so at the current time cannot precisely estimate the total cost of compliance over the next 5 years. Director Robert Hoyt presented an estimate for an additional **\$108 million** to meet the watershed restoration requirement to the Transportation, Infrastructure, Energy, and Environment Committee at a meeting on November 3, 2008.

Sources of County funding include \$30 million of current funding in the FY09-14 Capital Improvement Projects (CIP) for stormwater retrofit including Low Impact Development (LID) and stream restoration projects. About \$2 million per year of the CIP comes from the Water Quality Protection Charge (WQPC), the stormwater charge for residential and associated non-residential properties. The total WQPC for FY09 is approximately \$9 million and is used primarily for inspection/maintenance of existing and incoming stormwater facilities. The Charge was increased from \$27 to \$35 per unit in FY09.

The County has been successful in the past obtaining state/federal funding through grant programs, but recognizes the increased competition for these funds; and the uncertainty in terms of how much funding will be available to the County from these sources, how it will be conditioned, potential match requirements, and how funds distribution will be timed.

The County has a number of competitive advantages when it comes to grants and other aid.

1. It has well developed plans as a result of long term and constant effort by DEP and Park & Planning staff.
2. It has some available capital to meet matching requirements or otherwise fund unfunded elements of grants.
3. It has a dedicated enterprise fund.

While all these elements can be improved, they represent very substantial assets, especially as compared to other communities.

### **New opportunities and approaches:**

The coming federal stimulus package may be a once in a lifetime opportunity to fund capital projects. The projects that offer the best claims for funding are the ones that are ready to go and well-thought out. These funds may be able to offset some of the more expensive elements of the County's program.

1. WQAG recommends that the County maintain planning and administrative funds, so that federal monies can be accessed and administered. A cut in planning and administration at this time could be incredibly costly.

The WQPC currently serves as a key source of revenue for stormwater management, but it could be enhanced in order to fulfill additional obligations under the expanded MS4 permit. We need to evaluate bringing the commercial sector into the program in ways that improve stormwater quality without unduly burdening the business community.

2. WQAG recommends that the WQPC be re-evaluated.

To leverage funding for the MS4 permit requirements, the County could consider expansion of the Water Quality Protection Charge, funded primarily on a cost recovery basis. This model seems to have worked well in the wastewater and drinking water context. A fee-based system would be transparent, independent and not subject to restraints on tax increases, and would not be in direct competition with other tax-supported programs.

*Attachment B*

**Recommendations from the Education and Outreach Subcommittee**

The recommendations developed by the Education and Outreach Subcommittee of the WQAG are based on the public education goals listed under the MS4 Permit. The WQAG recommends that Montgomery County embark on a major public education program to inform the public and involve everyone in actions to ensure a healthy natural environment, clean water in our streams, and a safe drinking water supply.

**What is required by the MS4 Permit?**

The public education goals, established by the MS4 permit, require the development of implementation plans, performance goals, and deadlines related to:

- Establishing and publicizing a compliance hotline for the public reporting of suspected illicit discharges, illegal dumping, and spills.
- Providing information to inform the general public about the benefits of:
  - Increasing water conservation;
  - Maintaining community stormwater management facilities;
  - Practicing proper erosion and sediment control;
  - Increasing proper disposal of household hazardous waste;
  - Improving lawn care and landscape management (e.g., the proper use of herbicides, pesticides, and fertilizers, ice control and snow removal, cash for clippers, etc.);
  - Maintaining automobiles;
  - Improving private well and septic system management; and
  - Disposing of pet waste.
- Providing information regarding the following water quality issues to the regulated community when requested:
  - NPDES permitting requirements;
  - Pollution prevention plan development;
  - Proper housekeeping; and
  - Spill prevention and response
- Increasing residential and commercial recycling rates, improving trash management, and reducing litter.

**What is Montgomery County already doing?**

- Hot line for reporting of illegal dumping
- Rainscapes Program (voluntary Low Impact Development (LID) practices)  
Workshops, Pilot projects, Web site

- Public retrofit and restoration Projects  
Public meetings, field visits, fact sheets
- Water Quality Advisory Group  
Examines water quality issues, recommends to county leadership
- Enforcement  
Hotline follow-up, illegal dumping signs, fact sheets
- Solid Waste  
Recycling, grasscycling, composting
- Keep Montgomery County Beautiful Task Force-Public Works  
Grants for local sites, Adopt-A-Road, Storm Drain Marking
- Coordination with other jurisdictions  
COG, WSSC, MC-MNCPPC,
- Cooperation with and Support for watershed groups within Montgomery County and the Chesapeake Bay watershed  
Stormwater Partners Coalition
- Montgomery County Public Schools  
Residential program for 6<sup>th</sup> graders, monitored recycling in schools, watershed education imbedded in curriculum, Green Schools, GSES --a LEED certified school

### **Challenges**

Ultimately, these programs aim to change individual behavior and industry practice, both of which are equally diverse in the county. But citizens and businesses may not necessarily see the benefit of changing their behavior for the sole purpose of maintaining environmental standards, especially if some of the practices will require drastic change, effort, or monetary investment.

### **New Opportunities and Approaches: Public Awareness Campaign Recommended**

A successful public outreach program requires a comprehensive plan, strong program leadership, attainable goals, baseline data collection, targeted projects, multi-media approaches, measurable indicators, on-going assessment of progress, and reflective evaluation. It also requires a strong positive public image, rewards and motivations, and acceptance that success will require cooperation from nearly everyone.

Ensuring success of these efforts will require County leadership and staff to:

1. Build wider support through strong leadership.

We believe that a vocal “champion” for clean water will impress upon the public and industry the importance of maintaining water resources by addressing the issues in simple terms and attracting media coverage. The champion can be the well-publicized face to everyone in the county, providing needed information, promoting a positive clean-water image, and encouraging everyone to become part of the solution.

Other cities and watersheds have found great success through the leadership of a champion. The mayor of Annapolis (Ellen Moyer) initiated a GreenScaping program

over 10 years ago that annually brings communities together to improve public land in their neighborhoods. Other cities, such as Kansas City, have promoted rain gardens through the active participation of the mayor. Other communities have invested in water infrastructure (Atlanta, GA), and restoring natural areas along the Anacostia River (Prince George's County, MD).

Opportunities exist for all county council members, elected officials, and committee members to inspire needed change. Such opportunities include leading by example and acting as environmental stewards at home and work; publicizing green public buildings, parks, and school grounds; and, encouraging media coverage of success stories.

2. Achieve specific goals by targeting audiences.

Change will need to come from all sectors and communities. So while the public champion can build support from the wider audience, Montgomery County should identify and reach out to specific target groups, including the landscape management and construction industries, community groups, homeowners, renters, small-shop owners, shopping centers, and government facilities.

3. Involve Montgomery County public schools.

As one of the largest landholders in Montgomery County, and the provider of education to 140,000 students, MCPS plays two major roles in the health of our watersheds. WQAG strongly urges the appointment of an MCPS representative to a regular WQAG position, so that issues involving the school properties and/or the educational component can be included in our discussions. MCPS students should also be encouraged to participate in conserving natural resources by performing environmental work for their SSL credit.

4. Leverage existing capacity to minimize funding constraints.

Tremendous human resources exist in the expertise, dedication, and energy of individuals and groups in the volunteer organizations in the county, including watershed and environmental groups, youth groups, homeowners associations, and faith-based groups which can provide resources and linkages to communities that might otherwise be difficult to reach. Montgomery County should consider establishing a mechanism to utilize and coordinate across these groups, such as providing a forum that facilitates collaboration across organizations, or a grant program that encourages cooperation by requiring partnering of groups.

5. Set performance measures for public outreach

Setting performance measures and designing evaluation methods must be integrated into the first planning stages, as these elements are critical to achieving program goals. Evaluation efforts would benefit from taking a business-like approach, which utilize social marketing techniques that are designed to show actual behavior change.

Baseline data is critical to supporting evaluation, as it offers a condition against which to compare. Montgomery County would benefit from gathering existing data or collect new data through public surveys and environmental monitoring to ensure establishing a baseline to demonstrate actual changes, as opposed to estimated ones. Such comparisons also allow Montgomery County to adapt their efforts if the established goals are not being achieved.

## *Attachment C*

### **Background information from the Land Use Subcommittee**

The purpose of this section is to provide background information to the Montgomery County Executive and the Council on which water quality indicators might be used by the County to assess progress towards goals and requirements. We provide an overview of water quality indicators, recommend criteria for selecting water quality indicators, and recommend specific water quality indicators.

#### **Water Quality**

Montgomery County, Maryland is often cited as a leader in water quality management. It has some of the most advanced stormwater management requirements and generally has one of the strongest water quality protection programs in the country. Stormwater management is a particular concern and for a highly developed area such as Montgomery County it must focus not only new development but also on developed areas and areas being redeveloped.

Stormwater management is a particular challenge to maintaining water quality. To deal with this major source of water pollutants, the *Clean Water Act* (1972) established the National Pollutant Discharge Elimination Systems (“NPDES”) and its required system for Municipal Separate Storm Sewage Systems (“MS4”) discharge permitting process. Montgomery County’s own MS4 five-year permit was first granted on July 5, 2001 and is now up for renewal. According to the required annual report for 2006, the County's Permit was scheduled for reissuance in July 2006. However, Maryland Department of the Environment (“MDE”) has been in negotiations with the U.S. Environmental Protection Agency Region 3 since November 2005 to provide Permit language that includes a closer link between program and project implementation and achieving any established total maximum daily loads and water quality standards.<sup>1</sup>

Water quality assessment as a matter of public policy is based on intended uses and applicable federal, state and local monitoring requirements. Water uses include aquatic life and wildlife; recreation including swimming; drinking water; and fish/shellfish consumption. Various properties of water can be examined to derive conclusions about its quality. Biological, chemical, and physical indicators including pH, temperature, dissolved oxygen (DO), suspended solids, pathogens, and various other indicators can be measured.

---

<sup>1</sup> *Annual Report for 2006 NPDES Municipal Separate Storm Sewer System Permit*, Montgomery County Department of Environmental Protection for the Maryland Department of the Environment, March 2008.

The *Healthy and Sustainable Communities* report released by the Montgomery County Planning Department recognized the importance of “high quality streams” because in that they, “help maintain fish populations, reduce flooding and erosion, provide recreation and protect our water supply.” This report presented a three-point clean water goal was presented for the County:<sup>2</sup>

1. Protect and improve County water resources and drinking water.
2. Reduce damage to stream ecology.
3. Reduce the amount of pollutants that flow into the Chesapeake Bay.

This report presented data from four indicators of water quality: percent of streams rated good to excellent; nitrogen contribution to the Bay; phosphorous contribution to the Bay; and sediment contribution to the Bay. In addition to these indicators, several other potential indicators discussed were actual counts of fish and other species; degraded waters as designated by the State; stormwater runoff volumes; and percent of streams rated good to excellent analyzed by community income levels.

### **Water Quality Indicators**

We present a series of water quality indicators here that are in use in Montgomery County and/or the State of Maryland.

#### ***Maryland Department of the Environment***

#### ***Maryland Environmental Indicators***

<http://www.mde.state.md.us/aboutmde/reports/indicators.asp>

#### ***Water Quality Indicators (Winter 1999)***

- Nutrient Inputs to Mainstem and Tributary Waters
- Nitrogen Concentration Trends in the Tidal Waters of Maryland's Chesapeake Bay (new)
- Phosphorus Concentration Status and Trends in the Tidal Waters of Maryland's Chesapeake Bay (new)
- Chesapeake Bay Program Toxics Releases -- Maryland
- Extent to Which Designated Uses of Maryland's Surface Waters Are Being Met
- Atmospheric Nitrogen Loading to the Chesapeake Bay
- Contribution of Dissolved Oxygen Levels to Water Quality Impairment

---

<sup>2</sup> *A Framework for Action: Healthy and Sustainable Communities*, Montgomery County Planning Department in cooperation with Montgomery County Department of Environmental Protection and the Maryland-National Capital Park and Planning Commission, September 2008.

### ***Water Quality – Ecosystem Health (Summer 1999)***

- Designated Uses of Surface Waters
- Dissolved Oxygen and Water Quality Impairment
- Nutrient Inputs to Main stem and Tributary Waters
- Cropland Acres Under Nutrient Management Plans
- Phosphorus Concentration in Maryland's Chesapeake Bay
- Nitrogen Concentration in Maryland's Chesapeake Bay
- Atmospheric Nitrogen Loading
- Cropland Acres Under Integrated Pest Management

### **Criteria for Water Quality Indicators**

Indicators are most useful when they meet specific criteria.

For purposes of Montgomery County, we propose water quality indicators include these criteria:

1. Relate to Montgomery County's water quality goals and assessment of relative progress toward meeting these goals.
2. Address relevant federal, state and local monitoring and reporting requirements (e.g., MS4 Permit).
3. Measurable in a cost-effective manner that is scientifically valid and reliable.
4. Can be compared and contrasted with water quality indicators from other areas such as Maryland counties or other state and local jurisdictions.
5. Water quality indicators include assessments that are intuitive and meaningful to the public.

### **Montgomery County Maryland National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Discharge Permit**

The MS4 Permit ("Permit") for Montgomery County covers stormwater discharges. The Permit requires that:

1. Montgomery County shall contribute to Maryland's understanding of stormwater runoff and its effect on water resources by conducting a monitoring program.
2. County continue its systematic assessment of water quality within all of its watersheds and to maximize water quality benefits in priority subwatersheds using efforts that are definable and the effects of which are measurable.

## **Water Monitoring**

Montgomery County uses several water quality indicators to characterize storm flows for MS4 reporting purposes including both water chemistry and biological monitoring.

### **Water Chemistry Monitoring**

Water chemistry monitoring assesses the mean storm event mean concentrations (EMCs) and base flow mean concentrations (MCs) for nutrients, suspended solids, and indicator metals in mg/L for both the outfall and in-stream monitoring stations. The indicators are:

1. Total Nitrogen (TN)
2. Total Phosphorus (TP)
3. Total Suspended Solids (TSS)
4. Zinc (Zn)
5. Copper (Cu)

### **Biological and Habitat Monitoring**

In addition to water chemistry, Montgomery County also conducts biological and habitat monitoring for its MS4 Permit. For biological and habitat monitoring, Montgomery County's Department of Environmental Protection uses eight measurements of community structure and function to make up its Benthic Index of Biological Integrity (BIBI). Each measurement responds in a predictable way to increasing levels of stressors. Examining the details of the benthic communities provides more information on possible impairing factors than available just from the BIBI score. The five FFGs usually examined in a bioassessment are collector gatherers, filtering collectors, shredders, scrapers, and predators. These measurements include:

1. Functional feeding groups (FFGs)
2. Taxa richness
3. Diversity
4. Composition
5. Pollution tolerance.

In addition to biological and habitat monitoring, DEP monitors water quality parameters most closely related to stream biology health. These measures include:

1. Dissolved oxygen (> 5mg/l).
2. % Dissolved Oxygen Saturation (> 80)
3. pH (6.5-8.5)
4. Temperature (deg C)
5. Conductivity ( $\leq$  300 umhos).

In the table below from the 2006 MS4 Annual Report, we can see an example of results from these water quality indicators.

<i>Table III-D5. Water Quality Measurements in 2006 for Biological Monitoring Stations for Long Term Discharge Characterization</i>						
<b>STATION</b>	<b>PBPB104 (tributary)</b>		<b>PBPB309B (upstream)</b>		<b>PBPB310A (downstream)</b>	
<b>TYPE</b>	Benthic	Fish	Benthic	Fish	Benthic	Fish
<b>DATE</b>	3/15/2006		3/15/2006	7/12/2006	3/15/2006	7/12/2006
Dissolved Oxygen (> 5 mg/l)	8.7	*	10.2	7.98	10.75	8.49
% Dissolved Oxygen Saturation	78	*	90	93	96	90
PH (6.5-8.5)	6.73	*	7.15	7.4	7.25	7.11
Conductivity (<= 300 umhos)	529	*	163	170	163	180
Air Temperature (deg C)	14	*	14	27	12	19
Water Temperature (deg C)	10.6	*	10.1	23.2	10.5	12.8

\* PBPB104 was not monitored for fish in 2006

There are many other water quality indicators that could be used but may vary in practicality and usefulness. Maryland's Department of Natural Resources presented a summary of various water quality indicators and their relative strength in making conclusions about water quality.<sup>3</sup>

<sup>3</sup> *A User's Guide to Watershed Planning in Maryland*, Chapter 5: Field Assessment Methods, Maryland Department of Natural Resources, February 16, 2006.

**Table 5.5: Examples of Sentinel Indicators to Measure Progress Toward Goals**

<i>Indicator</i>	<i>Indicator Strength</i>	<i>Potential Source of Information*</i>
<i>Dry Weather Water Quality</i>		
Fecal coliform (or other pathogen indicator)	●	CBP, MD DNR
Nutrients (nitrogen or phosphorus concentrations)	●	EPA, MD DNR
Algal growth (Chlorophyll a or plankton)	⊙	CBP
Dissolved oxygen	⊙	MD DNR
Chemical concentrations (pesticides, metals, etc.)	○	CBP
Chemical concentrations in sediment (pesticides, metals, etc.)	○	CBP, USGS
Total Suspended Solids	⊙	CBP, EPA, MD DNR
Water clarity (turbidity)	⊙	CBP
<i>Biological</i>		
Fish diversity (F-IBI)	●	MD DNR
Aquatic insect diversity (B-IBI)	●	MD DNR
Single indicator species (e.g., striped bass, blue crab, shellfish)	●	MD DNR
Spawning or migration success	⊙	MD DNR
Submerged Aquatic Vegetation (SAV) Coverage	⊙	CBP
Riparian plant diversity	⊙	CBP
Finfish/shellfish contaminant monitoring (metals and pesticides)	○	MDE, MD DNR
<i>Physical and Hydrologic</i>		
Stream habitat index (RBP or RSAT)	●	MD DNR
Riparian habitat index	⊙	MD DNR
Channel/Bank stability (in Physical Habitat Index or SCA)	⊙	MD DNR
Summer stream temperature	⊙	CBP, MD DNR
Average summer baseflow	○	USGS
<i>Community</i>		
Trash and debris levels during annual cleanup	●	
Recreational use	⊙	
Public access	●	
Citizen attitudes toward streams	⊙	
Key ● = Excellent indicator, meets all of the selection criteria ⊙ = Decent indicator, meets 2 or 3 of the selection criteria ○ = Specialized indicator, meets only one selection criteria * Resources presented here were selected from Tier 1 of the Monitoring Resources in User's Guide Tool 3. CBP = Chesapeake Bay Program; MD DNR = MD Department of Natural Resources; EPA = U.S. Environmental Protection Agency; USGS = United States Geological Survey.		

*Attachment D*

<b>Meeting Date</b>	<b>Guest Name</b>	<b>Affiliation</b>	<b>Purpose</b>
1/14/2008	Ben Stutz	Policy Analyst for Councilwoman Ervin	To meet with the WQAG on behalf of Councilwoman Ervin, and to emphasize the Councilwoman's support of increasing minority awareness of and involvement in environmental issue
	Lianne Reisner	IMPACT Silver Spring	To introduce the work of the IMPACT Silver Spring to the WQAG and the relationships they have built with minority communities
	Ansu John	MC DEP, Outreach Coordinator	To introduce DEP's outreach priorities and discuss water-related needs, implementation, and audiences
2/11/2008	Marc Elrich	County Council	To present the Councilman's proposed changes to the County's Forest Conservation Law and discuss any water-related issues raised by the law
	Dale Tibbetts	Council Aide for Marc Elrich	
3/10/2008	Bob Hoyt	MC DEP, Director	To introduce DEP's existing/on-going efforts on forest and tree preservation in the county, and to answer any questions that the WQAG members had related to such broad preservation efforts and any changes to the Forest Conservation Law
	Laura Miller	MC DEP, Forest Preservation Coordinator	
5/12/2008	Mark Symborski	MNCPPC Planning	To present on the timeline and plan of action for developing a Water Resources Element for inclusion in the Functional Master Plan for the County's Comprehensive Plan
	Anya Caldwell	MCPS, Green Buildings	To present on the Montgomery County Public Schools' "Green School" program and its approach to incorporate source control stormwater management practices as a standard design requirement
	Craig Shulman	MCPS, Division of Construction	
6/4/2008	Laura Miller	MC DEP, Forest Preservation Coordinator	To present on MNCPPC's existing and proposed changes to clarify roles within and among agencies addressing forest conservation, enforcement, and amendments from Councilmember Elrich which were intended to increase oversight and mitigation for tree loss

*Attachment D*

<b>Meeting Date</b>	<b>Guest Name</b>	<b>Affiliation</b>	<b>Purpose</b>
1/14/2008	Ben Stutz	Policy Analyst for Councilwoman Ervin	To meet with the WQAG on behalf of Councilwoman Ervin, and to emphasize the Councilwoman's support of increasing minority awareness of and involvement in environmental issue
	Lianne Reisner	IMPACT Silver Spring	To introduce the work of the IMPACT Silver Spring to the WQAG and the relationships they have built with minority communities
	Ansu John	MC DEP, Outreach Coordinator	To introduce DEP's outreach priorities and discuss water-related needs, implementation, and audiences
2/11/2008	Marc Elrich	County Council	To present the Councilman's proposed changes to the County's Forest Conservation Law and discuss any water-related issues raised by the law
	Dale Tibbetts	Council Aide for Marc Elrich	
3/10/2008	Bob Hoyt	MC DEP, Director	To introduce DEP's existing/on-going efforts on forest and tree preservation in the county, and to answer any questions that the WQAG members had related to such broad preservation efforts and any changes to the Forest Conservation Law
	Laura Miller	MC DEP, Forest Preservation Coordinator	
5/12/2008	Mark Symborski	MNCPPC Planning	To present on the timeline and plan of action for developing a Water Resources Element for inclusion in the Functional Master Plan for the County's Comprehensive Plan
	Anya Caldwell	MCPS, Green Buildings	To present on the Montgomery County Public Schools' "Green School" program and its approach to incorporate source control stormwater management practices as a standard design requirement
	Craig Shulman	MCPS, Division of Construction	
6/4/2008	Laura Miller	MC DEP, Forest Preservation Coordinator	To present on MNCPPC's existing and proposed changes to clarify roles within and among agencies addressing forest conservation, enforcement, and amendments from Councilmember Elrich which were intended to increase oversight and mitigation for tree loss

	Sue Gander, David Faerberg, Walt Auburn, Jody Foster	MC Energy and Air Quality Advisory Group	To attend Ms. Miller's presentation on the Forest Conservation Law, and coordinate recommendations and timelines with the WQAG
	Martin Chandler	WSSC	To present on a repeated power failure of a pumping station in PG County and WSSC's efforts to implement a basin-by-basin study to rehabilitate their infrastructure
7/14/2008	Sean Gallagher	MCPS	To lead a tour of Great Seneca Elementary School, one of the county's green schools
	Anya Caldwell	Former MCPS Green Buildings Coordinator	
	Mark Symborski	MNCPPC Planning	To provide updates on the status of the timeline for the Water Resources Element Functional Master Plan
	Stan Edwards	MC DEP	To present an overview of the ongoing effort to amend the County's Road Code, including reviews of the stormwater revisions, final recommendations and proposed standards from the Stakeholder Workgroup
8/11/2008	Tom Traber	WSSC	To provide an overview of the budget process for WSSC and their significant infrastructure maintenance and repair needs
	Bob Hoyt	MC DEP, Director	To provide updates on DEP's reorganizational efforts due to the inclusion of the Solid Waste Services Division and to review the five main goals of County Stat
	Greg Drury	Wholeness for Humanity	To present on the EcoTour project that Wholeness for Humanity was sponsoring and to solicit participation from the WQAG at the DC GreenFest Town Hall meeting
10/6/2008	Mark Symborski	MNCPPC Planning	To provide an update on the Healthy and Sustainable Communities initiative led by MNCPPC
	Meo Curtis	MC DEP	To present a summary on the County's stormwater permit program, including accomplishments under the previous two permits and the new conditions proposed under the third generation permit

**WATER QUALITY ADVISORY GROUP**

12/8/2008	Ted Graham	MWCOG	To provide information on a workshop to address LID potential for redevelopment in the Anacostia water and request input and comments from the WQAG on the proposed agenda.
-----------	------------	-------	---



*Attachment E*

---

## **Water Quality Advisory Group**

*MISSION: To recommend policies, programs, and priorities that protect, maintain, and/or restore the biological, chemical and physical integrity of County streams, rivers, wetlands, groundwater, lakes, and other water resources.*

---

**October 6, 2008**

WHEREAS, The Water Quality Advisory Group (WQAG) was established by County ordinance in part to enhance the public participation element in connection with the National Pollution Discharge Elimination System (NPDES) Stormwater Permit;

AND WHEREAS, The ordinance establishing the WQAG mandates participation by certain public agencies with responsibilities relevant to permit compliance, including the Washington Suburban Sanitary Commission, the County Department of Environmental Protection, and the Maryland-National Capital Park and Planning Commission (M-NCPPC);

AND WHEREAS, The Maryland Department of Environment is about to issue a new NPDES Stormwater Permit which explicitly recognizes the role of the Montgomery County Public Schools in permit compliance;

AND WHEREAS, The WQAG's deliberations have been greatly enhanced by members who are also teachers in the MCPS system;

BUT WHEREAS, The MCPS has never been officially represented on the WQAG, or participated in WQAG deliberations;

AND WHEREAS, the WQAG believes that the MCPS is a major stakeholder with a critical role to play in permit compliance, both as the owner of lands and buildings which impact the stormwater problem and as educators of the children of Montgomery County;

AND WHEREAS, The members of the WQAG believe that the WQAG would better carry out its duty to make recommendations for improving water quality in the County if a representative of the MCPS participated in a regular way in WQAG deliberations;

NOW THEREFOR BE IT RESOLVED, That the County Executive and County Council be and hereby are urged to amend the ordinance creating the WQAG to add regular participation by an appropriate representative of MCPS.

Adopted by unanimous vote of the WQAG on October 6, 2008 at a regular meeting of the WQAG.

### **WATER QUALITY ADVISORY GROUP**

255 Rockville Pike, Suite 120 • Rockville, Maryland 20850 • 240-777-7700, FAX 240-777-7752

---

Attested to by:

Larry J. Silverman  
Chairman  
Date:

Dusty Rood  
Vice Chairman  
Date:

**WATER QUALITY ADVISORY GROUP**

255 Rockville Pike, Suite 120 • Rockville, Maryland 20850 • 240-777-7700, FAX 240-777-7752

---



*Attachment F*

July 17, 2008

Council President Mike Knapp  
Montgomery County Council  
100 Maryland Avenue  
Rockville, MD. 20850

Re: Proposed Forest Conservation Law  
Amendments

Dear County Council Members:

The Water Quality Advisory Group (WQAG) is hereby submitting comments for your consideration on the proposed amendments to the County's Forest Conservation Law. Recognizing that this is an extremely complicated environmental and land use statute with significant water quality impacts, the WQAG undertook substantial efforts to understand and analyze the Law and the proposed Amendments. We heard presentations from Councilmember Elrich's staff, MCDEP staff, and held a joint meeting with the Energy and Air Quality Advisory Committee with MNCPPC experts also in attendance and actively participating and informing the discussion.

First and foremost, it is clear that the County does not have, or at least does not follow, an over-arching and science-based forest conservation objective. What is the appropriate and necessary amount of forest cover in this County? Where do we stand relative to this benchmark? How much of this should be riparian, or stream side, forest cover? Absent such an over-arching objective it is difficult to evaluate these amendments.

The WQAG believes that forest cover constitutes the most desirable land use from a purely water quality perspective. We also recognize the importance of the landscape-location of forests – such as the enhanced water quality benefits forests along streams offer relative to upland forests and the benefits of forests in the County's headwater tributaries. Our review of the data suggests that while we, as a County may be slightly losing total forest cover (-7% since this was tracked in 1994), there has been an increase in forest cover along streams.

We also recognize that the type of development in Montgomery County is changing. Montgomery County has experienced significant development of open, undeveloped and forested properties ('greenfields') since 1994, which has resulted in the 7% loss of forested resources. It is our understanding that very few greenfield projects remain and the focus going forward will be on redevelopment and urban infill. We believe that this planning approach will inherently help to protect the County's existing forest resources while generating additional forest resources through afforestation. The County should complement these planning efforts by identifying critical forest protection and afforestation opportunities.

Any amendments to the Forest Conservation Law should recognize the delicate balance inherent to land planning and encourage the type of development and resource protection mentioned above.

**WATER QUALITY ADVISORY GROUP**

255 Rockville Pike, Suite 120 • Rockville, Maryland 20850 • 240-777-7700, FAX 240-777-7752

---



Our evaluation of this law also revealed that the law, as written, is extremely confusing and unclear. When the law applies, when you're exempt and what you have to do to comply is entirely unclear to us, let alone unknowing citizens, neighbors and others potentially regulated by this law. We support MNCPPC's proposal to clarify this law which, in and of itself, should result in additional protection of forest resources.

Thank you in advance for your consideration of our recommendation and insights. If there is anything else that we can do to support your review of this legislative amendment, please do not hesitate to contact us.

Sincerely,  
Water Quality Advisory Group

Larry J. Silverman  
Chair

7308 Birch Avenue  
Takoma Park, MD 20912  
301-346-3757

Cc: County Council  
County Executive

Attachment: Summary of Member Views

## **WATER QUALITY ADVISORY GROUP**

255 Rockville Pike, Suite 120 • Rockville, Maryland 20850 • 240-777-7700, FAX 240-777-7752

---



**The Forest Conservation Law from the Perspective of the Water Quality Advisory Group**  
**Summary of Member Views**  
July 17, 2008

The purpose of this attachment is to provide more detailed comments from the Water Quality Advisory Group regarding proposed amendments to the Forest Conservation Law (FCL) and related matters.

**1. Importance of the Subject:** The conservation of forests and the protection of street trees are vital to the achievement of water quality goals. It is difficult to imagine that the goals of the proposed stormwater discharge permit can be met without a robust public and private program to enhance forest resources in the County.

**2. Need for a Statement of Goals:** What is the long term goal of the County with regard to forest cover and tree canopy? What role will forest policy play in the achievement of water quality obligations? We urge the Council and Executive to address these questions as best they can. It will give shape to regulatory decisions, promote consistency through different agencies of government, provide developers and residents with critical guidance and direction, and insure some measure of accountability for the decisions the Council and Executive make on this matter.

**3. Need for Comprehensive Program:** The practice of Montgomery County and the State of Maryland is to deal with forests and trees through different laws and with separate approaches. Thus the proposed FCL as well as Park & Planning's draft proposals on green infrastructure deal only with forests and not with trees. Whatever the merits of this approach in terms of timing and sequence, WQAG urges to the County Council to pursue more comprehensive treatment of these interrelated matters. We believe it is vital to develop a County program and appropriate ordinances to enhance the urban tree canopy and increase forested lands in the County. We cannot afford to lose sight of the forest or the trees. Both are needed to achieve clean water goals.

**4. Need for Science Based Policy and Timely Data:** Our review of the data suggests that while the County may be slightly losing total forest cover (-7% since this was tracked in 1994), there has been an increase in forest cover along streams<sup>1</sup>. This conclusion must be tempered by the realization that the information base for forestry decision making is weak. The Advisory Group believes that policy should be built on accurate and timely information. While information can never be as good as what one might need, we believe that rapid improvement in the data is a necessary element as the County moves forward on its tree and forest programs. We understand

---

<sup>1</sup> The '7% overall forest loss' is based on an analysis of plans approved by MNCPPC since 1994. The 'increase in forest cover along streams' is based on the Law's sequencing priority emphasizing reforestation along streams and is supported by a University of Maryland study indicating a 13% increase in forests within the 100' stream buffers in Montgomery County.

that DEP is rolling out a new remote sensing system that will provide timely and accurate information. Unfortunately the progress is very slow, completing a “very tiny portion of the County for one year.” WQAG recommends that this program be supported and expedited and encourages the County to continue to seek state and federal help in insuring the essential data is useable and timely.

Timely data and science are essential to effective planning and decision making. Professor Glenn Moglen, who represents the academic community on our Group, gives the following example of data driven planning and the sound decisions that it can guide:

Planning for forest conservation should mean the following things:

**\*PRESERVATION\***

- Identifying critical existing forest resources (forests draining to high quality streams or to drinking water sources) and earmarking/rezoning such lands to "no development" status.

**\*REFORESTATION\***

- Identifying riparian buffer areas that could be reforested and targeting such areas for reforestation programs. Such areas should be simply reforested if they are on public lands, and easements or other mechanisms should be used to encourage reforestation on private lands.

- Identifying privately held agricultural land draining to high quality streams or streams that would be vulnerable to significant damage if development were to take place upstream. Like the riparian buffers, such lands should be put on top priority lists for easements or other mechanisms to encourage reforestation.

**5. High Priority to Water Quality:** Improvements to Water Quality should be an explicit priority of the proposed law. This means that forested areas that provide the most water quality benefits should be given the highest levels of protection. In practice this means that the current policy of Park & Planning to protect riparian buffers should be continued and expanded. Moreover, the County must recognize that some forested and treed areas around storm drains that run underground to streams function as riparian buffers even though they may be remote from the stream. The Advisory Group agrees with Member Eileen Straughan, an environmental engineer and consultant, that rules based on thorough ecological assessments are superior and more likely to achieve their objectives than cookie cutter, one-size-fits-all solutions.<sup>2</sup>

---

<sup>2</sup>For forest cover, this recognition should not be cookbook regulation, but instead should be scientifically/biologically/ecologically thought through. By that I mean maintaining forest cover in FUNCTIONAL forest buffers (not visually attractive riparian buffers through which we pass large storm drains that discharge stormwater into stream meander bends and blow out opposite stream banks and cause channel instability! Instead, when the County applies its policy and regulation, it should evaluate site development plans considering demonstrated fluvial geomorphic realities...that streams with access to their natural forested floodplains during flood provide significant water quality benefits (long term nutrient and carbon sequestration/sediment deposition among them) , and those that are disconnected DO NOT...Thus, Montgomery County’s regulations, both on the forest conservation and stormwater management/low impact development, should mandate preservation of streams that are currently connected to natural forested floodplains, and reconnection/ re-establishment of forested riparian buffers for those that are not.)

**6. Renew the Tree Canopy** As former WQAG Chair, Charles Andrews, has noted, the County currently has over 300,000 street trees, but lacks a comprehensive program to maintain and enhance these trees. For instance, the average street tree has a lifespan of about 50 years; therefore to maintain the current number of trees about 6,000 new trees need to be planted each year. For the past many years the County has only planted about 1,500 new trees each year, far less than the replacement level. In addition to County initiatives, there should also be incentives and/or requirements for private landowners in urban areas to avoid the unnecessary cutting of mature trees and to plant additional trees. The Advisory Group recommends that the County develop a program of education aimed at helping citizens understand the value of the tree canopy for water quality, cooling, and climate protection purposes. This should be followed by a program of strong regulation on tree removals and aggressive planting programs on public lands, including rights-of-way.

*The current RainScapes program, which provides incentives for planting shade trees on private lands should be promoted and expanded.* A number of WQAG members have personally participated in events associated with this program and can attest to the high quality and great value of RainScapes.

The WQAG is gratified that the new laws, originally sponsored by Council Member Berliner, passed to mitigate climate change, include a tree canopy element. We believe that the County should establish clear goals for the extent of the tree canopy, and develop programs to implement them. A good starting point is the goals set out in the Forest Preservation Strategy Update 2004. The Advisory Group is also concerned that the average age of Montgomery County trees, especially in the older neighborhoods, make the County especially vulnerable to catastrophic loss of tree cover, should a major storm or epidemic reach this area. WQAG urges the County to develop plans to mitigate this potential for massive catastrophic loss.

**7. Animal Control Issue Must be Recognized:** WQAG Member Mike Smith, a volunteer with the Friends of Sligo Creek, has noted that many tree planting programs are thwarted by deer predation. Laura Miller, the forester at DEP concurs. Reforestation/afforestation programs must take account of animal control issues. The Advisory Group heard evidence that many tree planting and forest restoration efforts, some of them in response to regulatory requirements, have failed because of predation. Failure to address the two issues in tandem will result in unsuccessful forestry programs. As a practical matter in deciding on mitigation measures for developers or publicly funded replanting programs, decision makers should anticipate deer predation and impose additional measures to account for it. The longer term solution is to manage the deer herd so that new forests have a chance to develop, and to manage the forests so as to restore balance to the different populations. Park & Planning is working hard on this issue. But the task is difficult. These population explosions are a cause and perhaps a symptom of the general unhealthiness of the County's forests.

**8. Protection of Agriculture:** We believe that the County should continue and expand its efforts to assist farmers and other commercial landowners in protecting riparian buffers and developing ways of improving profitability without sacrifice of environmental values. Former WQAG Member Lonnie Luther, a Montgomery County farmer, urges the Council not to impose permit requirements on farmers for timbering operations. The current practice of requiring only notice,

and not a permit application, for commercial non-development forest cutting should be continued. The WQAG believes that there is a great potential in the County for a sustainable forestry program, associated especially with agricultural property. Dr. Luther, who is also a food scientist at FDA, provided this example of sustainable forestry and of cooperation between County government and County agriculture:

A farmer's perspective: I have 20 acres of forest which will be harvested for lumber in a few years. I plan to thin out the smaller trees from time to time to permit the larger and more desirable species to grow and mature faster. I also have 4 acres of forest along a creek, and I am replanting it, as a riparian buffer, with 1400 trees and shrubs. The Soil Conservation District is providing cost share monies for the riparian buffer, including fencing and stream crossing expenses. I think Federal, State, and County monies are wisely spent on any forestry project, resulting in improved water quality.

WQAG concurs that projects of this sort are of very great value to the County and should be supported.

**9. Incentives and Goals for Tree Planting:** David Plummer, Montgomery County Soil Conservationist and a member of WQAG and the Forest Advisory Committee, has called for a program of

... incentives (rebates, free trees, coupons for trees from local nurseries, etc.) for people to plant trees on their property. The trees would come with planting and care instructions. This could be coordinated with the tree planting efforts that DPW&T does along the public road right-of-ways. I also believe that the hundreds of acres of open public land should be reforested – highway cloverleaves and medians, school grounds, unused sections of parks, etc.

Planting trees can help to instill a greater appreciation for our environment, so to the extent possible, this County sponsored tree planting campaign should involve volunteers from the local area where trees are being planted.

The Advisory Group believes that tree planting programs are an excellent investment for Montgomery County. WQAG recommends that the Forestry Conservation Advisory Committee and others develop a set of goals for tree planting programs, identify sources of funding and volunteer efforts, including highway agencies, developers, DEP, non-profit organizations, Natural Resources Conservation programs, individual citizens and property owners, and others. Clear goals, a million new trees in five years for example, should be set and a financing and labor strategy should be developed that will ensure successful achievement of the goals.

**9. Rule Clarification:** Our evaluation of the current Forest Conservation Law also revealed that the law, as written, is extremely confusing and unclear. As WQAG Vice Chair Dusty Rood points out, “When the law applies, when you’re exempt and what you have to do to comply is entirely unclear to us, let alone unknowing citizens, neighbors and others potentially regulated by this law. We support MNCPPC’s proposal to clarify this law which, in and of itself, should result in additional protection of forest resources.”

Clarification and simplification should be approached as part of a comprehensive policy review. The draft Stormwater Permit, the Road Code, the Water Resources Element will all be coming into effect at about the same time as the Forest Conservation Law may come into effect, if it evolves in the Council. Montgomery's forests and trees appear as a whole to be in a serious condition in terms of their health and functions. The combination of changing policies and at-risk resources seems to require a comprehensive plan and program. Members of WQAG submit these observations in the hope that they will assist the County Council and County Executive in formulating and carrying out such a strategic approach to forestland and water management.

Thank you for the opportunity to comment on this vital Council initiative, and thank you for your hard work on this subject.