# Statement of the
# Rivanna Conservation Society
# Public Hearing
# Rivanna River Total Maximum Daily Loads
# March 15, 2007

Good evening and thank you for this opportunity to share with you the perspectives of those who have dedicated much of their personal time and energy to assure the health and beauty of the Rivanna River.

My name is Roberta (Robbi) Savage, and I am the Executive Director of the Rivanna Conservation Society. I have more than 35 years of clean water program experience and was involved with the national Total Maximum Daily Loads, Federal Advisory Committee (TMDL FACA) charged with the development of the federal regulations for this program. Also representing the RCS this evening is Andy Wilson, RCS President emeritus and a member of the newly created Rivanna River Basin Commission.

The **Rivanna Conservation Society** (RCS) is comprised of individuals who are dedicated to the protection, preservation and enhancement of this lovely waterbody. Citizen volunteers give their time and talents to protect and enhance the Rivanna River for themselves, their community and for the generations that will follow. The RCS encourages the use of the Rivanna for recreation and exploration of the beauty of the watershed. The RCS, created on March 6, 1991, is a non-profit 501(c)(3) organization dedicated to safeguarding the ecological, scenic, recreational and historic resources of the Rivanna River and its tributaries.

**The Rivanna Conservation Society** sponsors events and activities throughout the watershed, including river paddles, riverbank clean-ups, public education forums, citizen involvement programs, teacher and student training events. The RCS also assures a continuing dialogue with locally elected officials to keep the health and protection of the Rivanna River at the forefront of our community's environmental agenda.

## The Importance of the Rivanna River TMDL

This evenings hearing is critically important to not only this watershed but for other downstream watersheds. The headwaters of the beautiful Rivanna River are located in the Blue Ridge Mountains of both Albemarle and Greene County, Virginia. The Rivanna traverses through Albemarle County and the City of Charlottesville. It then flows through Fluvanna County to the James River and ultimately empties into the Chesapeake Bay. So as we consider the development and implementation of the total maximum daily load for the upper reaches of the Rivanna River, we must keep in mind

that the decisions made for this TMDL will have implications for not only our Rivanna Watershed, but also for the James River and Chesapeake Bay watersheds.

This TMDL is also important because this tranquil and beautiful river has a rich past intertwined with our colonial history. The Rivanna River, often referred to as "**Mr. Jefferson's River"** is home to hundreds of species of plant and animal life. While we often believe that alterations to our nation's waterways generally occurred during and after the settlements, evidence to the contrary exists. The indigenous people of early America and European explorers used the Rivanna for transportation and sanitation. Historians believe that significant alteration and modification took place during these early years.

Without the direct and persistent intervention of dedicated persons and organizations, the waters of our beautiful Rivanna River will become seriously impaired. This is because pollution from stormwater runoff, animal and crop agriculture, community development and industrial expansion impact the health and quality of the River.

The nation and this community are calling for the development of meaning and scientifically defensible TMDLs. For example, the U.S. Supreme Court let stand a lower court's ruling that set stricter pollution limits for the Anacostia River. The court's decision means that there will be daily caps on the amounts of various pollutants dumped into the Anacostia. Previously, the Environmental Protection Agency had required only annual or seasonal pollution caps, which can be easier to meet. A panel of the U.S. Court of Appeals for the D.C. Circuit rejected that approach in April, and the Supreme Court declined to hear an appeal from the EPA and the D.C. Water and Sewer Authority.

The Clean Water Act requires states to determine "total maximum daily loads" of various pollutants, determining how much of each a water body can assimilate without becoming impaired. Environmental groups used that language to justify their call for a daily pollution cap. The EPA had argued that, “the law should be construed to allow annual or seasonal limits in some cases.” However, the court held that “‘Daily connotes every day."

This Supreme Court has set a precedent. The statutory requirements under Section 303(d) of the Clean Water Act States will assure that States develop lists of water bodies that do not meet water quality standards even after application of technology-based and other required controls are in place. States then establish priority rankings for water bodies on the list and set TMDLs for those waters.

TMDLs represent an upper level or a ceiling on specific pollutant loads that can enter a water body or an entire watershed so that the water body will meet and continue to meet state water quality standards. In addition, TMDLs can be used to allocate pollutant loadings among pollution sources within the watershed. It has been the tradition to

develop TMDLs for chemical pollutants associated with point source discharges. Non-point sources, including nutrients, ammonia, pH, and sediment have become the focus of TMDLs within the Chesapeake Bay Watershed.

**Water Quality Data Needs**

As the government agencies within the Commonwealth go about the collection of data necessary to develop the Rivanna TMDL, the RCS calls for the use of "best available data" to develop protocols for sharing relevant data with related government agencies and invested stakeholders. The RCS also encourages the government to be vigilant in its analysis of the aquatic biology and to be mindful of riparian conditions.

The Agency also needs to be meticulous in its collection of:

1) flow data
2) water column data
3) sediment and tissue data
4) channel characteristics information

As the contractors go about the initial phases of TMDL development, it will be critically important that they do sufficient research to determine:

1) What data exists
2) Who has the data
3) What form the data is in
4) How to access and who has access to the data
5) How to locate spatial and temporal links to data (e.g. GIS)
6) Determine the relationship of data to decision-making
7) Document the Quality Assurance and Quality Control (QAQC) techniques to assure credible and supportable data
8) Determine how much data or information is needed and what the correct level of detail and rigor is necessary to assure scientifically defensible TMDLs.
9) Identify what computer models to use, if and when necessary, as well as their overall accuracy – recognizing that models are tools, not solutions, and that models cannot replace in-stream monitoring and bio-assessments

Within the context of the Rivanna River, it is important that the Agency:

1) Develop, share and interpret numeric and narrative criteria for the public
2) Gather and share data on nutrients and sediments with the public
3) Utilize the monitoring data from Stream Watch and other scientifically based water quality monitoring data available throughout the watershed.
4) Communicate the design conditions, wet weather issues, and air/water interface. Be clear with the public about any limitations on resources that might inhibit load quantification, especially for NPS (urban, agriculture and silviculture).
5) Take special care in selecting the monitoring techniques, the analysis techniques, the quality of information sources, the scale of the problems, the cost of remediation and the time that it will take to address the problems identified by the TMDL.
6) Assure that in all areas of TMDL development and implementation:

It is also important that the state government agencies:

1) Describe how it intends to gather and use collected data
2) Share with the public how it intends to use collected data to make impairment decisions
3) Identify data that is being treated as readily available
4) Develop and share its rationale for not using existing and readily available data
5) Outline for the public which factors will be considered in developing a priority schedule

The state is also encouraged to define and share its development and implementation approaches and to specify if the Agency intends to utilize adaptive management processes. Should the Agency determine that it will be using phased implementation of the TMDL, the RCS suggests the creation and publication of measurable milestones, the evaluation of the results of the milestones to enhance the overall plan and a focus on cumulative reductions in pollutant loadings.

**Public Involvement**

The Rivanna Conservation Society intends to be active and involved throughout the TMDL development and implementation process and requests that the TMDL developers assure public involvement throughout the process. Public involvement is fundamental to the success of the TMDL. The RCS recognizes that this will require an enormous commitment of staff time and resources. The RCS also realizes that achieving meaningful public participation will require a genuine commitment of time and talent to listen to, consider and utilize citizen input. The Agency will need to identify sources of funding for TMDL development and implementation and to share this information with the citizens within the watershed. The Agency also needs to assure stakeholder involvement in allocation of assimilative capacity.

The RCS recognizes the challenges government professionals face in communicating the technical concepts and information in an easily accessible and understandable way to the public at large. However, the Agency is encouraged to make every effort to be clear and concise and to communicate its finding in plain English.

**StreamWatch Data**

The Rivanna Conservation Society is a partner and the fiscal administrator for the StreamWatch Program. Our members have been intimately involved in the development of StreamWatch and a number of the RCS members serve as volunteer StreamWatch Monitors. The quality of the StreamWatch data is exceptional and the RCS encourages the DEQ to utilize this data as a “primary” source of information. RCS also encourages the DEQ to 1) use “Family Level” to evaluate stream health in all

segments, not just those impaired by bacteria, and 2) identify water quality stressors in all river segments.

**Scientific Processes**

Throughout the development of the Total Maximum Daily Load for the Rivanna River, it is critical that the government and its consultants focus priority attention on the:

1) The amount of pollution and pollutants that the waterbody can receive and attain/maintain water quality standards
2) The impact of seasonal variation
3) The development of the margin of safety
4) Methodologies for developing numeric criteria for nutrients and clean sediment
5) Targets for drinking water parameters
6) Methods to address legacy loads
7) Guidance on allocation approaches including wet-weather and dry-weather loads
8) Methods to balance/handle continuous and intermittent events
9) Equity between point and non-point sources (e.g. agriculture, publicly owned treatment works (POTW) and some states)
10) Information on best management practices (BMP) effectiveness
11) Methods for translating waste load allocations (WLA) into National Pollutant Discharge Elimination System (NPDES) permits
12) Relationship between the TMDL and the Continuing Planning Process
13) Guidance on follow-up monitoring methods (e.g. parameters, frequency)
14) Waste load allocations for pesticide applications
15) The use of waste load allocations for point sources and load allocations for non-point sources (including natural background levels)

**Implementation plan should include:**

1) Permitting actions needed to achieve waste load allocations (WLA)
2) Management measures to achieve load allocations (LA)
3) Schedules for revising or issuing NPDES permits
4) Schedules for imposing non-point source controls
5) Milestones for implementation of NPS controls
6) Monitoring/modeling plan to measure effectiveness of NPS controls
7) Schedules for attaining water quality standards
8) Processes for revising TMDL

**Some causes and sources of impairment:**

1) fish advisories
2) nutrients

3) pathogens
4) sedimentation
5) chemical
6) biological
7) toxicity
8) habitat

**The Rivanna River**

Streams are designated as impaired if they violate the bacterial standards more than 10% of the time. The standards are [400cfu/100ml] for fecal coliform and [235cfu/100ml] for *E. coli*. DEQ has tested for both fecal coliform and *E. coli* but plans to drop the fecal coliform testing in the near future.

The five sections of the Rivanna designated as impaired are: Mechums River [tested above the *E. coli* standard 11% of the time], North Fork Rivanna River [33%], Preddy Creek [33%], Meadow Creek [44%], and Rivanna River below Charlottesville [22%], Beaver Creek [fecal coliform only, 13%].

In addition to the bacterial testing, the study will assess impairment of aquatic life (benthic) in the River, which is part of the TMDL development process.

A major problem in the Rivanna is the legacy sediments that remain in the river from logging and farming practices of past centuries. It is our hope that the TMDL will identify ways to effectively deal with this continuing problem.

As we understand it, the creation of the TMDL for the Rivanna River will be conducted in three phases:

1) **The Study Phase** (conducted by the Department of Environmental Quality (DEQ)) will calculate amounts from each pollutant source and estimate necessary pollutant reductions.
2) **The Implementation Plan** (administered by the Department of Conservation and Recreation (DCR)) will identify best management practices needed to make the necessary pollutant reductions.
3) **The Long Term Monitoring Phase** will build upon and enhance the implementation of the plan.

The Rivanna Conservation Society intends to be involved in all phases of the TMDL process and especially committed to the implementation of the TMDL plan. The RCS encourages the DEQ and the DCR to think on a geographic scale (watershed wide) to design solutions and/or approaches for implementing the TMDL. Because land use and water quality considerations are integral to future, growth and development in a particular location may be either enhanced or eroded by narrow thinking and planning. It

is possible to build capacity for future growth into the development of a TMDL. It will be important to use effective tools (e.g. computer technology) that allow for the examination of geographic scale data.

Another priority issue is the serious problem of legacy sediments introduced into the river through logging and farming practices over the centuries. We are hoping that the development of the TMDL will identify options for addressing this continuing problem.

The RCS also understands that some of the impaired sections of the River are flowing into reservoirs, while others, namely the North Fork, have become a less than ideal source of drinking water. This is an obvious priority, and we are wondering if the improvements to water quality in this area will result in lower costs for drinking water.

It is also important to be realistic in developing short-term milestones and goals. The problems associated with impaired waters took many years to reach their current state. It is unrealistic to believe that complex water quality problems created over generations can be resolved in a short time frame. However, it is possible to use interim milestones and indicators to show progress toward the final goal. Plans and resource projections should reflect the Commonwealth's long-term commitment to water quality improvement and protection.

## Changes to the Bacteria Criteria

The Rivanna Conservation Society is concerned that, as a part of the DEQ's triennial review, the criteria for bacteria might be modified. The RCS does not support the proposed change to increase the maximum allowable *E. coli* levels as it will undoubtedly increase human health risks and is unacceptable in terms of backsliding.

## Implementation

The RCS is well aware that the statute, under Section 303(d) does not mandate the implementation of the finalized TMDL. The Society congratulates the Commonwealth on its vision to move beyond the federal government's requirements and incorporate implementation in its 1997 statute. Even so, it is now essential that the Department of Environmental Quality and the Department of Conservation and Recreation work cooperatively together to begin planning for the implementation of the Rivanna River TMDL.

The RCS is committed to the immediate implementation of the approved TMDL. We will take extra efforts to engage the public and community leaders in the implementation process. The RCS is convinced that we have the opportunity to engage the community in the implementation, and we hope to serve as a national model for successful development and institution of a credible, scientifically defensible TMDL.

The RCS encourages the TMDL developers to begin tracking costs associated with the development and implementation of TMDLs as soon as possible. This will help plan for current and future resource needs, as well as reduce fear associated with the uncertainty of TMDL implementation, especially on private lands. The government should be mindful that many people view economics and jobs as being interchangeable. There may well be public concern, or fear of unemployment or lifestyle change, associated with the development and implementation of the TMDL. These concerns should be recognized and treated with respect.

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