STATEMENT OF
G. TRACY MEHAN, III
ASSISTANT ADMINISTRATOR FOR WATER
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER
OF THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

September 16, 2003

Good morning, Mr. Chairman and Members of the Subcommittee. I am Tracy Mehan, Assistant Administrator for Water at the U.S. Environmental Protection Agency (EPA). I appreciate this opportunity to discuss today's water quality challenges, and the Bush Administration's vision for protecting and restoring our Nation's watersheds.

INTRODUCTION

Last year, in a hearing on the 30th anniversary of the Clean Water Act (CWA), I testified before the full Committee regarding the tremendous progress that our Nation has made over the past three decades in addressing water pollution problems. Thanks to the investment of many local, Tribal, State, Federal, public and private partners we have successfully controlled the most egregious sources of pollution from municipal sewage treatment plants and industry. Many communities now enjoy the environmental and economic benefits of cleaner water, such as thriving lakefront communities in Cleveland and Chicago, restored fisheries in Lake Erie and the Potomac River, and increased revenues from real estate investment, recreation and tourism in many coastal communities such as Boston.

Despite those success stories, we recognize that many challenges remain. There are signs that some of our waters are in distress. States are reporting increases in beach closures and fish consumption advisories, and a large zone of low dissolved oxygen in the Gulf of Mexico.

Our water programs are at a historic turning point. Today I first want to share with you our vision for the future and to discuss some of our top priorities: our efforts to reorient our programs towards a ***watershed approach***; establishment of a national-scale ***water quality monitoring and assessment program***; better implementation of the ***Total Maximum Daily Load (TMDL) program***; and, greater reliance on innovative tools such as ***trading*** and ***watershed-based permitting***. All of these activities are critical in addressing today's water quality challenges more effectively and efficiently. Finally, I will address our efforts to control ***stormwater*** runoff.

THE WATERSHED APPROACH

Now that we have largely addressed problems from discrete point sources of pollution, we need to turn our attention to threats that are much more difficult to control, such as: nutrient over-enrichment, urban runnoff, ground water/surface water interactions, invasive species, microbes in drinking water, and atmospheric deposition. These complex problems demand a more comprehensive or watershed-based approach that focuses less on the "end of pipe" and instead targets pollutants coming from the land – nonpoint source pollution or diffuse runoff. This approach to environmental management brings together public and private sector efforts to address

the highest priority problems, looking at all sources of pollution within hydrologically-defined geographic areas. The approach is grounded in sound science, characterized by robust stakeholder involvement, and focused on environmental results.

Because most water quality problems are best solved at the watershed level rather than at the individual waterbody or discharger level, we need to examine how we can best integrate the efforts of local watershed groups. Over the past decade and a half, we have seen the rise of literally thousands of citizen-based watershed organizations working to protect and restore their lakes, rivers, wetlands, and estuaries.

To provide support for these locally-driven watershed protection efforts, in May EPA announced nearly $15 million in grants to 20 watershed organizations selected as part of President Bush's new Watershed Initiative. The grants will support community-driven initiatives to improve water quality and enhance outdoor recreation. EPA intends to announce a solicitation for new Watershed Initiative nominations for FY 2004. We are confident that these projects will result in cleaner water for these communities and will serve as models for other communities. We are grateful for Congress' enthusiasm for this Initiative and ask support for the President's request of $21 million for the Initiative for next fiscal year.

MONITORING AND ASSESSMENT PROGRAMS

As we transition from a technology-based approach to a water-quality based-approach, and begin to reorient our programs on a watershed basis, it is imperative that we strengthen our water quality monitoring and assessment programs. In the 1970's, monitoring was primarily carried out at or near the end of the pipe, to measure how

effectively individual permits were working. Today, however, we must be able to assess the inputs of millions of diffuse sources of pollution, such as sediments from construction sites, fertilizers from agricultural lands, and even pollutants coming from the air. And, to enable the use of more innovative tools and flexible approaches, such as trading between pollution sources, we need better baseline monitoring data to help us keep score.

How clean is the water? We currently have enough information to allow us to know what the conditions are in some site-specific areas, but as stated in *EPA's Draft Report on the Environment 2003*, "At this time, there is not sufficient information to provide a national answer to this question with confidence and scientific credibility."

Working with State, Federal, tribal, and local agencies, with the private sector, with universities and with the public, we must be able to provide answers to some very fundamental questions such as: How clean is the water? Is it getting any better? Are our management actions working? Without answers to these questions, we are challenged when it comes to making decisions about how best to address water quality problems and allocate our limited resources for cleanup, pollution prevention, and restoration.

Currently, most States monitor only a portion of their waters. While some States are using new approaches like statistically-based surveys to characterize the overall condition of waters from a representative sample, many are still in the beginning stages of using these tools. And, because State standards and assessment methods vary across State lines, we find we cannot add up the data. In varying degrees, States are

working to improve their monitoring systems, and EPA is working with them to help them identify and implement the key tenets of good monitoring programs.

Many Federal agencies have, over the years, conducted a range of monitoring programs that have yielded valuable water quality data. However, none of them were designed to characterize the overall national condition of the waters of the U.S. in a comprehensive, statistically-valid fashion. Because of the lack of comprehensive, national-level data, we cannot yet systematically document whether or not our pollution programs are effectively improving water quality on a national scale.

Besides EPA's recent *Draft Report on the Environment 2003*, the Heinz Center Report on the *State of the Nation's Ecosystems,* and various reports from the General Accounting Office, the National Academy of Public Administration and others show that there are major gaps in aggregate nationwide data on water quality and overall ecosystem health. These reports call for a national investment to build a cost-effective, scientifically-sound foundation for our water quality management decisions.

We need, therefore, to take four critically important steps to achieve our goal of better monitoring for better management. *First*, we need to work with States to improve and strengthen State monitoring programs so that they can generate credible, comparable, comprehensive information. EPA is currently working with the States to ensure that they all achieve, for the first time, a set of basic monitoring elements including a common set of core water quality indicators that can be compared over time and across State boundaries. In March 2003, EPA provided States guidance on such elements for a State monitoring and assessment program. *Second,* we must promote the use of multiple monitoring tools such as statistically-based surveys, predictive

monitoring, and remote sensing to support the full range of water quality decisions. Statistically-based surveys, such as EPA's Environmental Monitoring and Assessment Program for example, provide a scientifically rigorous way to sample a subset of waters and then provide an estimate of the quality of all waters, along with a statement about the uncertainty surrounding that estimate. *Third*, we must manage our electronic data systems to share and improve compatibility of monitoring information and make data more accessible to the public. And *fourth*, perhaps most importantly, we must build stronger partnerships at the Federal, State, Tribal, and local levels to facilitate the sharing of comparable data and the use of multiple monitoring tools.

We need to continue working with States, Tribes, and our Federal partners to identify what investments are needed for long-term improvements in water quality monitoring. We need to look for efficiencies through new monitoring approaches, such as statistically-based surveys or the use of models, through better collaboration, and through data sharing. And, we need to secure commitment from all stakeholders to better monitoring for better management of our water resources. We will be able to target our control actions wisely, and achieve the level of protection we need.

THE TOTAL MAXIMUM DAILY LOAD PROGRAM

As we look to manage our watersheds more holistically, the Total Maximum Daily Load (TMDL) program is one of our key CWA tools. In enacting Section 303(d), Congress retained a water quality-based approach for waters that remained polluted after the application of technology-based and other controls. TMDLs do not themselves require compliance; they simply establish a pollution budget for impaired waters. This

information is key to determining what actions should be taken in a watershed to address ongoing water quality problems. The TMDL is then translated into permit requirements for point sources. For other pollution sources, the program relies on local, State, Tribe and Federal watershed plans and programs to achieve implementation of the TMDL.

This part of the CWA was not a priority for about 20 years while EPA focused primarily on industrial and municipal dischargers. Few States were addressing the TMDL requirements in the CWA until the wave of litigation began in the early 1990's, when environmental groups, anxious to get the program off the ground, filed lawsuits in a total of 40 States. EPA and States now operate the TMDL program pursuant to judicial settlements or decrees in 22 States. Prior to 1999 fewer than 1,000 TMDLs were completed. As of today, States and EPA have approved or established about 8,000 TMDLs. States and EPA continue to work to improve the quality of TMDLs and use TMDLs to achieve water quality goals on a watershed-basis.

Because TMDLs are water-quality based, they can be information-intensive, sometimes prompting widespread and systematic monitoring to identify and characterize problems and priorities, and to track progress in solving them. Public involvement can contribute to this information process both directly and through increased visibility for problem-solving. In addition, such public involvement can help make sure that TMDLs get translated from allocations into action, because information brought before the public is itself a driver for action.

WATER QUALITY TRADING

EPA believes that water quality trading, which allows sources to find the least cost alternative to achieving clean water, can be a critically important tool for restoring impaired watersheds efficiently and cost effectively. In its analysis of the Clinton Administration's Clean Water Initiative, EPA concluded that the total potential savings from all types of trading (point to point, point to nonpoint, and pretreatment) ranges from $658 million to $7.5 billion annually. Another study of three watersheds in the Midwest found that the cost of controlling phosphorus loadings from point and nonpoint sources could be reduced by 40% in Wisconsin and by more than 80% in Michigan when trading was applied between point and nonpoint sources. These examples illustrate the potential for water quality trading to reduce pollution with greater efficiency and to achieve significant water quality and environmental benefits.

Market-based approaches to improving the quality of the environment are not new. Air emissions trading programs date back to the Acid Rain program and the lead-in-gasoline phase-down programs implemented under the Clean Air Act. These and other programs have clearly demonstrated that market-based approaches can dramatically and quickly reduce emissions at substantially lower costs.

In January, EPA issued its 2003 Water Quality Trading Policy. The Policy provides guidance on aligning trading programs with the Clean Water Act and implementing regulations and identifies common elements of credible trading programs. The Policy supports trading to improve or preserve water quality in a variety of circumstances. In unimpaired waters, trading may be used to preserve water quality by offsetting new or increased discharges of pollutants. In waters impaired by pollutants, trading may be used to achieve earlier pollutant reductions and progress towards water

quality standards in advance of the development of a TMDL. And, trading may be used to reduce the cost of achieving reductions contemplated by a TMDL. The Policy highlights existing Clean Water Act flexibility that can facilitate trading programs and emphasizes the need for accountability and safeguards to ensure that trading programs protect our resources and maintain progress towards attaining water quality standards.

Key Principles and Safeguards for Water Quality Trading

A number of core principles and environmental safeguards form the foundation of EPA's Water Quality Trading Policy, and these principles help ensure that trading programs create actual pollutant reductions, avoid hotspots, provide accountability for trading activity, and involve the public:

- Trading programs operate within the existing regulatory structure and are consistent with all aspects of the Clean Water Act.
- Trading programs are designed to meet water quality goals including TMDLs.
- Trading programs ensure that water quality standards are not exceeded.
- Trading programs retain enforceability of National Pollutant Discharge Elimination System (NPDES) permits.
- Trading can be used to comply with water quality-based effluent limitations; however, EPA does not support trading to comply with existing technology-based effluent limitations except as expressly authorized by Federal regulations.
- Trading programs include accountability mechanisms for nonpoint sources that trade to ensure that promised pollutant reductions actions are taken.
- Trading programs are visible and engage the public in program design.
- Trading programs monitor to ensure anticipated load reductions are achieved, or to take corrective action if loads are not adequately reduced.

- Trading is voluntary and based on collaboration among watershed stakeholders. States and Tribes may choose to establish trading programs in accordance with EPA's Policy. There is no requirement to implement or participate in a trading program.

Water Quality Trading: Examples of Environmental Innovation

We already see evidence that water quality trading programs work. For example, the State of Connecticut's nitrogen credit exchange program is expected to save the State an estimated $200 million in control costs through trading, while also making significant gains in cleaning up pollutants in Long Island Sound.

In the Cherry Creek watershed in Colorado, a trading program conducted in conjunction with a TMDL has reduced phosphorus loads to the Cherry Creek watershed by approximately 450 pounds per year. The nonpoint source projects that were implemented to create the phosphorus credits have provided ancillary environmental benefits such as flood control and wildlife habitat. A partnership trading effort in Illinois' Piasa Creek along the Mississippi River will save several millions in capital improvements to an aging drinking water treatment facility, while reducing sediment loads to the Mississippi River. The Grasslands selenium trading program in California, the nation's first nonpoint source cap and trade program, utilized an innovative penalty and rebate system to create economic incentives to substantially reduce selenium levels in Kesteron reservoir that were adversely harming bird populations.

Experience with trading has also taught us that trading will not work everywhere. For example, the level of pollutant reductions that would need to be achieved from all sources in a given watershed may be such that additional, or surplus, reductions cannot be achieved so as to allow trading. Certain watersheds may not have the number and

mix of sources necessary for trading to be successful. In addition, trading programs that work in one State or Tribal area may not be successful in others. Just as each watershed has unique characteristics and needs, each trading program will be tailored by State agencies and stakeholders to meet environmental goals. EPA recognizes that States and Tribes face diverse water quality issues, sociological and economic factors and political considerations. EPA's Trading Policy is intended to provide consistent guidance, while allowing sufficient flexibility for States and watershed stakeholders to create workable solutions.

EPA believes that water quality trading programs, where carefully designed and implemented, can be powerful and effective tools for States, Tribes, local governments and citizens to use in achieving the goals of the Clean Water Act, while also saving taxpayer dollars.

WATERSHED-BASED PERMITTING

An important part of the watershed approach includes fostering innovations that provide data and information in ways that allow stakeholders at the local level to better assess and address their unique problems. Watershed-based permitting is one such innovation. To clearly communicate support for watershed-based permitting, on January 7, 2003, we issued the Watershed-based Permitting Policy.

Watershed-based NPDES permitting is an approach to developing NPDES permits for multiple point sources located within a defined geographic area (watershed boundaries). Through this approach, NPDES permitting authorities consider watershed goals and the impact of multiple pollutant sources and stressors, including nonpoint source contributions. Watershed-based permitting may encompass a variety of activities ranging from synchronizing permit issuance within a basin to developing water quality-based effluent limits using a multiple-discharger modeling analysis.

To better understand how watershed-based permitting approaches work, EPA is working with permit holders and State agencies to document different approaches currently being implemented. The lessons learned from these approaches are documented in a series of case studies featuring watersheds across the country. The case studies provide background information on the watershed, give an overview of the permitting strategy or project goals, and describe the expected outcomes and measures of success. These case studies will provide stakeholders with the information and lessons learned necessary for implementing this approach in other watersheds. Current case studies include: the State of Connecticut and the Long Island Sound; State of North Carolina and the Neuse River; and ConocoPhillips in Colorado. Municipal case

studies include Louisville-Jefferson County, Kentucky; Sanitation District #1 in Kentucky; and Clean Water Services in Oregon. These case studies are available on EPA's web site at www.epa.gov/npdes. EPA has also been working with municipalities through the CWA section 104(b)(3) grants program to investigate additional ideas and approaches.

To help interested parties implement watershed-based approaches, EPA published draft Implementation Guidance in the Federal Register on August 25, 2003 (we are soliciting comments until Sept. 24th). Technical Guidance, which will focus on developing permit requirements and procedural issues for permit development and issuance, will be issued later this Fall. In addition, EPA is providing training course materials, brochures, speaking at conferences and meetings all designed to create a network for sharing lessons learned, and innovative approaches to NPDES permitting.

STORMWATER

I am informed that the Subcommittee is interested in the stormwater program, particularly our efforts to implement the Phase II Rule that became effective on March 10, 2003. Stormwater runoff from urban, agricultural, and industrial areas is the most common problem affecting our nation's rivers, lakes and coastal waters. In the latest reports from the States, urban runoff was cited as the source of impairments on 34,871 miles of rivers and streams, 7.7 million acres of lakes, and 5,045 estuary square miles. EPA's NPDES program addresses stormwater runoff from urban as well as industrial areas.

Stormwater Phase I

The Clean Water Act directs EPA to address stormwater from urban and industrial sources, including construction sites. In 1990, EPA promulgated Phase I of the stormwater program. That rule requires permits for the control of stormwater discharges for communities with populations over 100,000, construction sites disturbing more than five acres, and many categories of industrial facilities. Over the last 13 years, EPA has worked closely with the States and municipalities to implement the stormwater program. Many have risen to the challenge and developed excellent, comprehensive programs. San Diego's "Think Blue" campaign is a highly successful effort that educates local citizenry on the impact of daily life on one of the City's most precious resources: the Pacific Ocean. The City of Austin, Texas has developed a comprehensive program to protect the Edwards Aquifer and the famous Barton Springs recreational area that includes local ordinances and comprehensive educational and voluntary efforts and involves a wide spectrum of homeowners, developers, and industry. Another successful effort involved the clean up of the lower Charles River that runs through Boston. The City of Boston focused on detecting and eliminating illicit discharges to its storm sewer system. This effort has lead to the discovery and removal of dozens of illicit discharges and prevented over 1 million gallons of contaminated flows from entering the River.

Stormwater Phase II Implementation

Phase II of the stormwater program requires smaller communities located in urbanized areas to develop and implement storm water controls to restore and maintain

local water resources. Phase II also extends permitting requirements to construction activities that disturb between one and five acres of land.

At present, 45 States are authorized to administer the NPDES program and thus issue permits, including storm water permits, in their respective States. These States are also responsible for working with communities to implement the Phase II requirements. Unfortunately, implementation of this program happens to coincide with one of the most serious economic crises facing State and municipal governments. State governments are reducing their budgets and their staffs and are also reducing the funds they normally provide to communities. These budget problems are affecting the ability of States and communities to implement these new stormwater requirements. In short, implementation is going a bit slower than expected.

There are two important milestones that are good indicators of State progress in implementing the Phase II program – issuance of NPDES permits to municipal separate storm sewer systems (MS4s) and to construction sites disturbing 1 to 5 acres. EPA has encouraged States to use general permits to cover all activity within a regulated category for the entire State – issuing one general permit for construction and one for MS4s. To date, approximately 28 of the authorized States have issued permits for MS4s and approximately 34 have issued permits for construction activity. Indications are that the other States are working hard to finalize these permits and all are expected to have them finalized within the next year.

EPA was behind schedule in reissuing its construction general permit (issued on July 1, 2003), and several of the EPA Regional offices (Regions II, VI, IX, X) still have not issued permits for MS4s in those handful of States where EPA remains the

permitting authority. However, two of these Regions (VI, and IX) have proposed permits.

We have anecdotal information that many communities did not meet the deadline for applying for and obtaining permit coverage, often due to the fact that there was no State permit in place under which they could apply for coverage. Because of the real economic problems causing delays, EPA is taking a supportive approach to helping States and communities come into compliance with these requirements. It is also important to keep in mind that the Phase II regulation allows communities five years to develop and implement their programs; therefore, full implementation is not expected until 2008.

To assist States and communities, EPA is working on a number of fronts. First, financing is critically important. As you know, the 1987 Amendments to the Clean Water Act created the State Revolving Fund (SRF) system. Every State and Puerto Rico now operates a successful revolving fund that provides low-interest loans to fund a wide variety of projects to clean up rivers, lakes, coastal waters. The President's FY 2004 Budget extends the federal commitment to capitalize the CWSRF through FY 2011, providing an additional $21 billion in loans over the next 20 years. We continue to work with each State and are encouraging them to target their financing toward important water quality efforts, including stormwater projects.

EPA has been working to develop useful tools to assist States and communities as they implement this new program. EPA has developed a comprehensive "Menu of Best Management Practices" to help communities plan design all aspects of their stormwater programs. In addition, EPA has produced guidance on developing

measurable goals to help States and communities evaluate the effectiveness of their programs. Finally, EPA has invested considerable effort in its stormwater website (www.epa.gov/npdes/stormwater) to ensure that States and communities have the tools and information they need.

Oil and Gas Extension

I understand that the committee is also interested in hearing about the extension EPA recently finalized for oil and gas construction activities. When EPA wrote the Phase II regulation over five years ago, we significantly underestimated the number of oil and gas sites that would be affected. Since that time, EPA has become aware of new information on the impact of the regulation on this industry indicating that it may impact as many as 30,000 facilities. Additionally, questions have been raised about the appropriateness of some aspects of the program for these sites. Considering these factors, EPA decided to postpone the effective date of these requirements until March 10, 2005. Over the next two years, we intend to analyze the impact of these regulations on the oil and gas industry and to evaluate the appropriateness of the program requirements.

CONCLUSION

All of the tools I have been discussing represent a major programmatic shift that is necessary to make further progress in cleaning up America's waters. It is time to expand our focus: from an almost exclusively point source orientation to one that examines all sources of pollution, including nonpoint; from relying largely on

technology-based standards to a water quality-based approach; and, from emphasizing inputs to focusing on environmental outcomes. We have made tremendous progress in cleaning up our waters over the past three decades -- an achievement that is even more remarkable in view of substantial increases in our population. As a nation, we can be proud of how far we have come. These successes should strengthen our resolve to complete the hard work ahead.

Thank you. I look forward to your questions.

* * *