Testimony of the
Tennessee Municipal League
Tennessee Water Quality Managers Association

April 13, 2005

Presented by
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Assistant Director
Water Quality Control Department
City of Maryville, Tennessee

Before
United States House of Representatives
Committee on Transportation and Infrastructure

Subcommittee on Water Resources and Environment

On

Wastewater Blending

April 13, 2005

Introduction

Good morning Chairman Duncan, Congresswoman Johnson, and Committee members; my name is Jack Graham. I am the Assistant Director of the Water Quality Control Department of the City of Maryville and am an affiliate member of the Tennessee Municipal League (TML). TML represents 347 cities and towns across Tennessee. Resolution of the blending issue has been a top priority and environmental issue for the TML for many years.

On behalf of the TML and the City of Maryville I would like to thank you, Chairman Duncan, and the Committee for holding this important hearing to discuss how and why blending is used at wastewater plants in Tennessee and throughout the country to maximize treatment in peak wet weather and to protect public health. The misinformation surrounding this important wastewater management technique is substantial and I hope that my testimony may improve the Committee's understanding on this issue. I will cover several topics: (1) how this issue started; (2) costs associated with eliminating this essential wet weather flow management option; (3) impacts on our state program due to regulatory confusion; and; (4) the confusion and misinformation caused by some of the activist groups to galvanize support for their anti-blending positions.

How It Started

My wastewater plant, like many others, is designed to blend primary and biologically treated wastewaters to maximize the amount of wet weather flow that can safely be treated prior to disinfection and discharge. Blending protects public health and the environment by increasing wet weather wastewater plant capacity and thereby significantly reducing raw sewage overflows into streams and potentially into homes. Because Clean Water Act permit limits for public health and environmental safety are met even when blending, a blended discharge is fully protective. Blending ensures that under peak wet weather flow conditions, the biological system which is sensitive to hydraulic surges will also be protected. Without blending, the public and the environment will be adversely impacted. For that reason, many wastewater plants in Tennessee that specifically incorporate the blending process as part of their design received federal Clean Water Act grants for construction.

In early 1999, without any public notice, EPA Region IV informed the Tennessee Department of Environment and Conservation (TDEC) that blending violated the Clean Water Act's secondary treatment and bypass regulations. This announcement came some 26 years after the adoption of the secondary treatment rule and 20 years after the adoption of the bypass regulation. Based upon EPA Region IV's position, TDEC changed their permit wording and began issuing permits that prohibited blending. In June of 2000, EPA called a public meeting in Chattanooga to inform municipalities of this position. It was a complete surprise since EPA itself had approved and funded the plants that blend. Appeals of NPDES permits followed as TDEC began to implement EPA Region IV's new edict. We later came to find out that EPA Headquarters did not authorize Region IV to take this position.

Cost Impacts

The cost to eliminate blending at municipal plants in Tennessee is estimated to exceed hundreds of millions of dollars (*see* Appendix A). This is in addition to the monies we are expending for infrastructure improvements to our collection systems. The costs associated with a blending prohibition would not benefit the public, as blending wastewater plants already meet applicable water quality standards. In fact, the effluent quality of my facility when blending is far better than the receiving water quality (attached). As a group, we objected to this change in EPA position and requested that EPA Headquarters address the matter.

Impact of Regulatory Confusion over Blending

Since that time, EPA has stated many times that the bypass and secondary treatment rules don't prohibit blending. EPA even said this in a letter to Senator Frist and the entire Tennessee Congressional Delegation, which I have submitted for the record (attached). Nonetheless, EPA Region IV continues to insist that blending is illegal. Therefore, my ability to plan future improvements to my wastewater facility is at a complete standstill. We want to design a plant expansion that would use blending in some peak weather conditions, but can't get this approved due to the ongoing regulatory confusion over blending. Because of this standstill and the increasing needs of the City, Maryville now blends more often than it did when this matter started. Blending must be resolved so that municipal facilities like mine may continue to operate properly, and be designed in the future to accommodate growth, peak wet weather flows, and new pollution reduction requirements.

Misconceptions and Misinformation

Several misconceptions have been perpetuated regarding blending that have prevented resolution of this issue:

First, allowing blending will not affect the need for cities to invest in their wastewater infrastructure. It does not somehow allow poorly operated systems off the hook. Blending is an operational tool that allows a biological system to function properly under peak flow conditions while minimizing collection system backups. Regardless of whether or not a system blends as a means to safely process peak wet weather flows, collection system maintenance and replacement is needed. For example, Maryville, a City of 23,000, is spending $1.6 million on collection system maintenance improvements and plans on spending about $12 million more for plant improvements to address growth and processing of peak flows. This money is included in the upcoming budgets but clarification of the blending issue is necessary to allow plant design and construction to proceed. We are not unusual in this regard.

Second, many Congressional offices were informed by activist groups that blending presents a public health threat, *even where permit limits are met.* Putting aside that such claims are a basic attack on the very structure of the Clean Water Act, the statements are

false. The "Rose" report distributed by NRDC, was based upon a mischaracterization of the Washington, Pennsylvania wastewater plant operations. I personally know the manager of that system – Ray Dami. No one from NRDC ever visited that facility to discuss its operations. Attached to my written testimony is a letter from Mr. Dami confirming that many assumptions regarding plant operations were simply wrong. NRDC's threat analysis assumed that 2 million gallons of raw sewage was being blended at that facility, that the disinfection system provided no pathogen reduction and that swimming occurred under a 1.5-inch rainfall event. As Mr. Dami's correspondence confirmed, none of these assumptions are correct and all lead to a grossly miscalculated risk level. His plant does not blend raw sewage, his disinfection process is designed for peak flows and the blended effluent is cleaner than the water upstream of the plant during rainfall events. From a practical point, Pennsylvania generally recognizes that body contact recreation does not even occur in cold weather and the creek turns into a raging torrent under high rainfall events. The elderly and small children are not swimming in these conditions as assumed by the Rose report.

Third, to stir up opposition to blending, some activist organizations are resorting to scare tactics. For example, one group in Tennessee urged its members to mobilize churches by claiming that baptisms should not occur in rivers because blending, under peak flow conditions, will contaminate waters and such waters are "simply too dangerous to wash away original sin." *See* Appendix B. This and other outrageous claims triggered thousands of letters from the general public against blending.

Finally, if wet weather flows did pose a public health threat, the answer is not to build huge storage tanks or larger biological facilities with special engineering provisions to handle wet weather flows, as has been suggested by NRDC and other activist groups. Biological treatment does not disinfect wastewater. Disinfection is a non-biological process – usually chlorine or ultraviolet light that is applied at the end of the wastewater treatment process. Not only can disinfection be increased to provide "insurance" against adverse impacts in wet weather, there are other more effective and innovative technologies for processing peak wet weather flows -- such as ballasted flocculation. Adopting a one size fits all approach to constantly changing wastewater flows and requiring all flows to go through all processes would waste municipal resources, ensure the construction of inappropriate facilities, and divert monies from more cost effective solutions.

In summary, TML has attempted to resolve this matter in a professional and reasonable manner for over five years. Our state program is at a standstill on this issue and it is preventing municipalities from undertaking necessary plant improvements. The Regional prohibition to blending literally sprang out of nowhere, without any public notice or authorization from EPA Headquarters. Resolution of this issue is long overdue. We urge this committee to ask EPA for a definitive legal interpretation of the rules at issue, as a means for bringing the matter to closure.

Thank you for this opportunity to testify. I would be happy to answer any questions you may have.

Appendix A:

Cost Estimates to eliminate flow blending in selected Tennessee cities:

City A:
The City of Knoxville, as noted in the separate letter submitted to the committee by the City of Knoxville operates three wastewater plants. The cost to provide biological treatment for all flows at just one of the plants, Kuwahee plant, would be in excess of $100,000,000.00 dollars with little if any improvement in the discharged water- the plant currently meets its NPDES permit limits and was built with EPA grant funds. Note that Knoxville is currently in the process of implementing major system improvements as mandated by EPA at the rate of $1,000,000.00 per week for the next ten years to eliminate all wastewater overflows. Source: City of Knoxville.

City B:
The City of Maryville currently has provisions for blending of peak wet weather flows and is awaiting the blending policy guidance before completing plans for plant expansion. The current biological capacity is 10MGD – capable of blending and meeting NPDES permit limits up to 41 MGD. The cost to modify to treat biologically 41 MGD is $18,300.00.00. Source: City of Maryville

City C:
The City of Cookeville currently has a plant capacity of 14.0 MGD biological with provisions to blend for a total capacity of 30 MGD. The cost to modify to treat 30 MGD biologically is $1,540,000.00. Source: City of Cookeville.

City D:
Plant Capacity currently 3.0 MGD biological with provisions to blend for a total capacity of 10.0 MGD. The cost to convert to treat 10 MGD biologically is $4,255,000.00. Source: J.R. Wauford and Company, Inc.

City E:
Plant Capacity currently 2.7 MGD biological with provisions to blend for a total capacity of 5 MGD. The cost to convert to treat 5 MGD biologically is $3,000,000.00 Source: J.R. Wauford and Company, Inc.

Total cost for the five cities listed – $127,000,000.00.

This number represents only five of the many cities within the State of Tennessee that currently use modified flows within their plant during peak wet weather events and meet their NPDES Clean Water Act discharge limits. The ultimate statewide costs of a blending prohibition would be much greater.

Appendix B:

From: <RHolland@packagingcorp.com>
To: <jhgraham@ci.maryville.tn.us>
Date: 1/3/2005 7:03:56 AM
Subject: [TCWN] Action Alert-LTE's needed

FYI
----- Forwarded by Richard Holland/COU/PackagingCorp on 01/03/2005 05:56 AM -----

Diannah Miller <diannah@tcwn.org> Sent by: Tennessee Clean Water Network <TCWN@listserv.utk.edu>

To: TCWN@listserv.utk.edu
cc:
Subject: [TCWN] Action Alert-LTE's needed

12/28/2004 02:31 PM
Please respond to Tennessee Clean Water Network

River Friends,
We need to alert you to an imminent threat to clean water and ask for your help in mobilizing the river movement to respond. We are asking concerned citizens to write Letters to the Editor voicing their concern about a proposed policy that would allow utilities to mix largely untreated sewage with treated sewage and dump it whenever it rains.

Sewage Dumping
Last fall, the EPA proposed a "sewage blending" policy. It allows sewage treatment plants to bypass an important treatment phase when it rains and mix partially treated waste with fully treated waste and dump that mixture into our rivers and streams. This policy poses a serious threat to human health and the environment. For more information on the policy including fact sheets, visit TCWN's river conservation partner American Rivers at http://www.americanrivers.org/sewagedumping.html

Thanks to you and many others, EPA received nearly 100,000 comments, mostly in opposition, to its proposed sewage dumping policy. However, EPA continues to bow to industry pressure and is preparing to finalize this policy guidance. Groups from across the country are gearing up with a nationwide effort to engage the public, the media, and Congress. We are asking for your help! We need business owners, fishermen and hunters,

boaters, concerned parents, local ministers and priests, teachers and others affected by this threat to our waters to state their concern by writing a Letter to the Editor (LTE) to your local paper and the nearest large-market paper (Knoxville, Nashville, Chattanooga, or Memphis). I have attached sample LTEs to this email. Please let me know if you are interested in writing a letter and please send me a copy of your letter if you do submit one so I may track it for printing. Contact me if you would like more information.

Thank you for your commitment to protecting Tennessee's rivers and streams.

Diannah Eagle Miller
Tennessee Clean Water Network
Development and Communications Director
PO Box 1521
Knoxville, TN 37901
865.522.7007

From: <RHolland@packagingcorp.com>
To: <jhgraham@ci.maryville.tn.us>
Date: 1/3/2005 7:03:56 AM
Subject: [TCWN] LTE samples

More FYI
----- Forwarded by Richard Holland/COU/PackagingCorp on 01/03/2005 05:57 AM

Diannah Miller
<diannah@tcwn.org> To: TCWN@listserv.utk.edu
cc:
Sent by: Tennessee Clean Water Network <TCWN@listserv.utk.edu> Subject: [TCWN] LTE samples

12/28/2004 02:32 PM
Please respond to Tennessee Clean Water Network

regarding previous message calling for LTEs

Diannah Eagle Miller
Tennessee Clean Water Network
Development and Communications Director
PO Box 1521
Knoxville, TN 37901
865.522.7007
(See attached file: General EE edits 12-04-04.doc)(See attached file: Religious EE edits 12-04-04.doc)

Proposed proposal backslides on clean water protections

The Environmental Protection Agency is poised to let sewage treatment plants off the hook from much of their responsibility to kill potentially-deadly germs before releasing sewage into creeks and rivers across the country. The proposed policy would allow the utilities to mix largely untreated sewage with treated sewage and dump it whenever it rains. This proposal violates clean water policy and backslides on treatment standards that have been used for over 50 years.

Currently, communities across the nation are facing serious clean water crises. The cause: aging sewer and drinking water treatment systems with cracked and broken pipes and deteriorating equipment. While these systems can handle thousands and thousands of flushing toilets on any given day, the extra water running into the sewer during rainstorms overwhelms them.

The responsible thing to do would be to repair and upgrade the sewer system rather than the lower the bar for protecting public health, but the funds to do this are increasingly hard to come by. Local governments are strapped for cash these days, and federal assistance has declined by 70 percent since the 1970s. Some states and local communities are trying to step up to the plate by approving bond referendums to improve clean water infrastructure. But the federal government must stop shirking its responsibilities.

Like spending on roads and schools, repairing and upgrading sewage and wastewater treatment systems is an investment that makes a community a nicer – and safer -- place to live and raise a family. Dumping sewage during rain events because aging treatment facilities are not able to adequately treat it is not an acceptable alternative.

This proposal poses serious risks to human health and the environment. Scientists at EPA estimate that up to 3.5 million Americans get sick each year from contact with germ-contaminated water. Public health studies have documented that more than half of all waterborne disease cases in the United States in the past fifty years were preceded by heavy rainfall. Untreated and partially treated sewage contaminates water with microorganisms, like E. coli, and other germs like cholera, dysentery and hepatitis.

Higher levels of untreated sewage and disease-causing germs will cause more people to get sick. Children, the elderly, and people weakened immune systems are more likely to get sick from coming into contact with contaminated water.

If this policy is finalized, more germs and pollution will be dumped in our waters. Dumping untreated sewage will contaminate drinking water sources, make recreational waters unsafe, and pollute fish and shellfish beds. If clean water standards are lowered, communities will not upgrade their water treatment systems and our waters will become increasingly polluted. This proposal is the wrong solution. We have worked hard over the past 30 years to improve water quality, and this is a step backward.

Now is the time to act. Send a letter to EPA Administrator Mike Leavitt urging him not to finalize the sewage blending policy. Ask your Congressional representatives to tell EPA to stop this policy. And share information about dangers the of this proposal with local public health interests, drinking water utilities and industries that depend on clean water. Human health, the environment and industries that depend on clean water are at stake.

Will we ever return to the 'beautiful, beautiful river?'

As late as the 1950s, outdoor baptisms were common in churches throughout the south. Baptists performed this sacred immersion ritual in rivers, bayous and lakes- while singing hymns like "We'll gather at the river, the beautiful, beautiful river." Some prefer it to indoor baptisms because it follows the biblical example of Christ's baptism in the Jordan River.

Yet, while many would like to preserve this tradition of baptism in a natural setting, the sad fact is that many rivers and streams are simply too dirty to wash away original sin.

The Environmental Protection Agency (EPA) is contemplating a policy that will further backslide on clean water protections. This proposed policy will allow water treatment facilities to skip an important treatment step during rain events and mix largely untreated sewage with treated sewaage, and then dump the contaminated mixture into rivers and streams all across the country.

Currently, communities across the nation are facing serious clean water crises. The cause: aging sewer and drinking water treatment systems with cracked and broken pipes and deteriorating equipment. While these systems can handle thousands and thousands of flushing toilets on any given day, the extra water running into the sewer during rainstorms overwhelms them.

The responsible thing to do would be to repair and upgrade the sewer system rather than the lower the bar for protecting public health, but the funds to do this are increasingly hard to come by. Local governments are strapped for cash these days, and federal assistance has declined by 70 percent since the 1970s. Some states and local communities are trying to step up to the plate by approving bond referendums to improve clean water infrastructure. But the federal government must stop shirking its responsibilities.

Like spending on roads and schools, repairing and upgrading sewage and wastewater treatment systems is an investment that makes a community a nicer – and safer -- place to live and raise a family. Dumping sewage during rain events because aging treatment facilities are not able to adequately treat it is not an acceptable

alternative.

This policy poses serious risks to human health and the environment, as more pollution and sewage will be dumped into our waters. Scientists at EPA estimate that up to 3.5 million Americans get sick each year from contact with germ-contaminated water. Public health studies have documented that more than half of all waterborne disease cases in the United States in the past fifty years were preceded by heavy rainfall.

Untreated and partially treated sewage contaminates water with microorganisms, like E. coli, and other germs like cholera, dysentery and hepatitis. Children, the elderly, and people with weakened immune systems are more likely to get sick from coming into contact with contaminated water.

The Environmental Protection Agency should not lower water treatment standards. Send a letter to EPA Administrator Michael Leavitt urging him not to finalize the sewage blending policy and ask your Congressional representatives to tell EPA to stop this policy. Also, share information about the dangers of this proposal with local religious and public health interests, drinking water utilities and industries that depend on clean water.

If Christians wish to follow the example of Christ's baptism in the Jordan River, they shouldn't have to trade their original sin for a potentially deadly disease.