Testimony before the

Subcommittee on Water Resources and Environment

Committee on Transportation and Infrastructure

U.S. House of Representatives

On The Raw Sewage Overflow Community Right to Know Act

H.R. 2452

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Introduction

Good afternoon, Chairwoman Johnson, Ranking Member Baker, and members of the Subcommittee. I appreciate the opportunity to appear before you today in support of H.R. 2452, the Raw Sewage Overflow Community Right-to-Know Act. My name is Katherine Baer and I am the Director of American Rivers' Healthy Waters campaign. American Rivers is a national non-profit organization whose mission is to stand up for healthy rivers so our communities can thrive. We believe rivers are vital to our nation's and our communities' health, safety and quality of life. We pioneer and deliver locally-oriented solutions to protect natural habitats and build sustainable communities. We lead national campaigns to raise awareness of river issues and mobilize an extensive network that includes more than 65,000 members and activists to help safeguard our rivers.

This week we will celebrate the Clean Water Act's 35th birthday. This landmark law has provided enormous benefits to communities nationwide from cleaner water, better wastewater management, and strong control over polluters. One of the most notable accomplishments of the Clean Water Act has been the enormous local, state, and federal investment in water treatment infrastructure. The number of people served by publicly owned treatment works increased by 35% since the Clean Water Act was passed and the number served by systems with secondary treatment or better has almost doubled. As a nation, we can be proud of the strides we have made to clean up rivers that used to be little better than open sewers. Nonetheless, we still face challenges to reach the Act's goals of fishable and swimmable waters.[1] Despite great strides made in the area of wastewater treatment, hundreds of billions of gallons of raw and partially treated sewage still flow into our streams, rivers, and lakes each year.[2] The reasons for this continued pollution problem are many and include old and crumbling infrastructure, sharp declines in federal investment in wastewater infrastructure, sprawling population with an associated increased burden of sewage and stormwater into wastewater systems, and variable enforcement of existing permits and laws. In fact, the U.S. Environmental

[1] Clean Water Act §101(a)(2).
[2] U.S. EPA, *Report to Congress: Impacts and Control of CSOs and SSOs*, Office of Water EPA 833-R-04-001 (2004).

Protection Agency (EPA) noted in its 2000 report on water funding needs that, left unaddressed, these problems would cause us to slip back to water pollution levels we haven't experienced since the 1970s.[3]

Regardless of the cause, however, we have a fundamental right to know when sewage spills into the streams and rivers where we and our families swim, play and paddle. This is a simple and common-sense concept that not only keeps people safe, but also builds much needed public support for the continued investment needed to maintain well-functioning sewers and treatment plants and other solutions needed to reduce sewage pollution. Rivers are vital community assets. And while we continue working to fully realize the Clean Water Act's goals, and to achieve the full economic and quality of life benefits of clean rivers, we must provide the information necessary for people to stay safe and healthy.

For this reason, American Rivers strongly supports H.R. 2452, the Raw Sewage Overflow Community Right-to-Know Act, which requires monitoring and public notification of sewage overflows that have the potential to affect public health. The provisions in H.R. 2452 mirror those proposed as part of a comprehensive and broadly supported Environmental Protection Agency (EPA) proposed 2001 rule for Sanitary Sewer Overflows that was never finalized.

This testimony will address the following topics:

1. Contact with untreated or partially treated sewage is a serious public health threat that must be addressed;
2. Current nationwide policy does not require public notification when there are sewer overflows that could affect public health, needlessly leaving people without critical information;

[3] U.S. EPA, *Progress in Water Quality: An Evaluation of the National Investment in Municipal Wastewater Treatment,* U.S. EPA 2-72, (June 2000).

3. H.R. 2452 provides a straightforward, common-sense solution by requiring monitoring and notification to protect public health. Keeping the public informed is a first line of defense to keep people safe and healthy while solutions to reduce sewage pollution are sought.
4. Some cities and utilities are already doing a good job of notifying the public using a variety of mechanisms, showing both that notification can be achieved and is not onerous, and is also an important part of sound management and community safety. H.R. 2452 will help to create a level playing field across the country.

I. Contact with Untreated Sewage is a Public Health Threat

Every year hundreds of billions of gallons of untreated sewage flow into our rivers, lakes, and coastal waters.[4] Unknowingly, many Americans and their loved ones risk serious illness when untreated sewage seeps into the water they use for recreation or drinking. Individuals become ill from contaminated recreational waters through ingestion or contact with eyes, ears, nose, or skin. Children are especially vulnerable since they tend to submerge their heads more often and are more likely to swallow water when swimming. The EPA estimates that up to 3.5 million people become ill from contact with raw sewage from sanitary sewer overflows alone each year.[5] Since 1989 there have been increases in the number of waterborne disease outbreaks involving gastroenteritis associated with recreational contact in ambient waters.[6] For instance, one study found that swimmers at polluted beaches in the Great Lakes region were at least twice as likely to have gastrointestinal illnesses as non-swimmers.[7]

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[4] U.S. EPA, *Report to Congress: Impacts and Control of CSOs and SSOs*, Office of Water EPA 833-R-04-001 (2004) at 4-13 and 4-18.
[5] U.S. EPA, *Advanced Notice of Proposed Rulemaking, NPDES Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows* (Jan. 4, 2001) (withdrawn Jan. 20, 2001).
[6] Lee et al. 2002. Surveillance for Waterborne-Disease Outbreaks- United States, 1999-2000. In: *Surveillance Summaries,* November 22, 2002. MMWR 2002;51 (No. SS-8):1-48.
[7] Wade et al. 2006. *Rapidly Measured Indicators of Recreational Water Quality Are Predictive of Swimming-Associated Gastrointestinal Illness.* Environmental Health Perspectives, v. 114, no. 1, Jan. 2006, 24-28.

However, many public health experts believe that the number of illnesses caused by untreated sewage could be much higher than is currently recognized. Many people that get sick from contact with untreated sewage aren't aware of the cause of their illness and don't report it to their doctors or local health officials, leading to underreporting. For example, a recent study found that up to 1.5 million people get gastroenteritis at beaches in just two California counties each year alone.[8]

Sewage spills and the associated health effects are likely to worsen in coming years as the population grows, green space is replaced with roads and parking lot surfaces, and the resulting increase in stormwater runoff and wastewater overwhelms overburdened wastewater treatment systems. At the same time, funding for clean water infrastructure has been continually cut. According to EPA, climate change threatens to aggravate the problem by altering rainfall patterns and creating more extreme weather events yielding more sewer overflows in some regions.[9] Global warming may well increase the frequency of waterborne disease outbreaks, which are already strongly associated with extreme precipitation.[10]

Finally, consuming contaminated drinking water or food also is known to be a primary source of exposure to untreated sewage. Both are well documented risks associated with disease. Surprisingly, although few states currently require it, notifying public water supply intakes and other downstream water-users is one of the most important steps for protecting public health and avoiding treatment plant problems.[11] The largest recorded outbreak of waterborne disease in the U.S. occurred as a result of contaminated drinking water. Over 400,000 people became ill after exposure to *cryptosporidium* in Milwaukee's drinking water supply in 1993. Water supply intakes must be alerted when

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[8] Given, Suzan, L.Pendleton & A. Boehm. *Regional Public Health Cost Estimates of Contaminated Coastal Waters: A Case Study of Gastroenritis at Southern California Beaches. Environmental Science and Technology*. 40 (2006): 4851-4858.

[9] See e.g. U.S. EPA, *A Screening Assessment of the Potential Impacts of Climate Change on Combined Sewer Overflow (CSO) Mitigation in the Great Lakes and New England Regions*, DRAFT Report, EPA/600/R-07/033A (2006).

[10] Curriero, et al. 2001. *The Association Between Extreme Precipitation and Waterborne Disease Outbreaks in the United States, 1948–1994.*Vol. 91, No. 8, J. Am. Pub. Health Assoc. 1194-1199.

[11] Richard W. Gullick et al., *Developing Regional Early Warning Systems for U.S. Source Waters*, Journal of the American Waterworks Association (June 2004).

source waters are contaminated so that they can take additional steps to protect the public's drinking water.

When an individual comes in contact with sewage, there are a great number of acute and chronic illnesses that can result depending on the pathogen or chemical contaminating the water. These pathogens can be broken down into three categories: bacteria, protozoa, and viruses. There are many pathogens that have yet to be documented – less than 1 percent of these pathogens have been cultivated and studied – and in many cases the pathogen responsible for an illness cannot be identified. The most commonly recorded health effects associated with sewage are acute conditions such as diarrhea caused by waterborne pathogens. In addition to these acute effects, pathogens and a number of emerging contaminants can cause serious chronic illnesses such as reactive arthritis, liver damage and heart disease. The health effects from contact with emerging contaminants in sewage such as pharmaceuticals are potentially harmful to the human endocrine system. Even less is known about the potentially synergistic effects of exposure to numerous contaminants and pathogens. Attachment A is a review of the known and suspected health effects of exposure to untreated or partially-treated sewage.

II. Current Policy Leaves the Public in the Dark About Sewage Spills

Currently, federal public notification, or "right-to-know" requirements for sewage are almost nonexistent, and state requirements, where they exist, are highly variable. While some states and individual cities or utilities have excellent public notification programs, in most places people are left in the dark when there has been a sewage spill in places where they would come into contact with it. H.R. 2452 fills this deficit by requiring minimum nationwide requirements for public notification. Given the extent of sewers and treatment plants and the popularity of river access and in-water recreation, there are significant potential health risks nationally in the many places where strong notification programs do not exist.

Federal Requirement for Public Notification

There are no nationwide public notification requirements for sewer overflows, from either separate sanitary or combined sewer systems, that protect public health.

Sanitary Sewer Systems

Serving over half the U.S. population, Sanitary Sewer Systems (SSS) were designed to convey sewage, but not stormwater. These systems are found in all states, with municipal sanitary systems serving approximately 164 million people.[12] EPA does not have exact numbers for the amount of sewage spilled in Sanitary Sewer Overflows (SSOs), but based on modeling EPA estimates that the annual SSO discharge is between three and ten billion gallons.[13] This imprecision points to the need for better monitoring of sewer systems. The primary causes of SSOs are line breaks from deterioration and lack of maintenance, line blockages, and infiltration from stormwater runoff.[14]

Public Notification for Sanitary Sewer Overflows

Unfortunately, National Pollutant Discharge Elimination System (NPDES) permits do not require public notification for sewage spills from sanitary sewer systems. Instead, NPDES permit holders must report instances of noncompliance with permit conditions to the NPDES permitting authority, usually the state environmental agency, but not to the public or health authorities.[15] Because SSOs that result in a discharge to waters of the U.S. represents "noncompliance," they must be reported to pollution control authorities. But again, these spills do not have to be reported to the general public or health authorities.[16] If the overflow or spill also may endanger health or the environment, the permittee must report this to the permitting agency within 24 hours of becoming aware of the problem, and submit a written report to the permitting agency within five days.[17]

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[12] U.S. EPA, *Report to Congress: Impacts and Control of CSOs and SSOs*, Office of Water EPA 833-R-04-001 (2004) at 4-22.
[13] Id. at 4-26. Note that an earlier unpublished report estimated this number at 311 billion gallons.
[14] U.S. EPA, *Causes of SSOs*, http://www.epa.gov/npdes/sso/control/causes.htm.
[15] 40 CFR 122.41(l) (6) & (7)
[16] See U.S. EPA, *Advanced Notice of Proposed Rulemaking, NPDES Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows* (Jan. 4, 2001) (withdrawn Jan. 20, 2001) (hereinafter Proposed SSO Rule).
[17] 40 CFR 122.41(l) (6) (i).

This information rarely, if ever, gets publicized. The written submission must include the cause of noncompliance, corrective actions taken, and steps planned to reduce and eliminate similar occurrences.[18] Other cases of noncompliance that do not endanger health or the environment must be reported as part of the permittee's monthly discharge monitoring reports (DMRs) that are submitted to the state or federal permitting authority.[19] While there are no federal requirements for public notification of an SSO, states can require, and individual permits can include, public notification provisions.

A broadly supported proposed SSO rule that was withdrawn at the beginning of the current Administration's term in 2001 would have expanded and strengthened public notification by requiring:[20]

- Immediate reports to the permitting authority including SSOs that do not reach waters of the U.S.;
- Immediate notification to the public, public health agencies, drinking water suppliers, and others of SSOs that may imminently and substantially endanger human health;
- Clarified requirements for what information about SSOs should be reported on discharge monitoring reports;
- Publicly available annual reports summarizing all SSOs; and
- Posting of overflow locations where there is a potential to affect human health.

Combined Sewer Systems

Combined Sewer Overflows (CSOs) are different from separated sanitary sewer overflows. They occur in systems designed to convey sewage and stormwater together to plants for treatment. During rain and storms, these combined systems overflow into local waterways, releasing untreated sewage and disease-causing pathogens. Forty-six million Americans in 32 states and the District of Columbia are served by combined sewer

[18] Id.
[19] 40 CFR 122.41(l) (7).
[20] Proposed SSO Rule.

systems and EPA estimates that 850 billion gallons of untreated sewage and stormwater is released annually.[21]

Public Notification for Combined Sewer Overflows

EPA developed a policy (subsequently codified in the Clean Water Act in 2000) to reduce and eliminate CSOs that requires sewer utilities to undertake nine minimum control measures.[22] One of these requirements is public notification, with the goal to inform the public as to the location and occurrence of CSOs and the public health effects.[23] EPA has provided some guidance for what types of notification may satisfy the CSO Control Policy, including posting signs at affected use areas and selected public places, posting at outfalls, placing notices in local media, letter notification to affected residents, and a telephone hotline, all of which could suffice.[24] Unfortunately, compliance with this policy is highly variable resulting in large segments of the public remaining unprotected.[25]

Some states, such as Michigan, require real time reporting by the sewer plant operator to the state environmental agency, public health departments, and the local newspaper.[26] In contrast, in Minnesota, permittees are merely required to post identification signs at CSO outfalls.[27] Likewise, in Kentucky, some CSS permits require notification while others require none.[28] Here in Washington, D.C., one will see CSO warning signs while walking on the C&O towpath, but none are visible from the water in the highly accessible and heavily paddled section of the river upstream from Georgetown.

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[21] U.S. EPA, *Report to Congress: Impacts and Control of CSOs and SSOs*, Office of Water EPA 833-R-04-001 (2004) at 4-13 and 4-18.
[22] 59 Fed. Reg. 18,6888 (Apr. 19, 1994) and 33 U.S.C. §1342(q), Clean Water Act §402(q).
[23] U.S. EPA, *Combined Sewer Overflows Guidance for Nine Minimum Controls*, Office of Water EPA 832-B-95-003 (1995) <http://cfpub.epa.gov/npdes/cso/guidedocs.cfm> (last updated 2002).
[24] Id.
[25] See e.g. Environmental Integrity Project, *Backed Up, Cleaning Up Combined Sewer Systems in the Great Lakes* (2005) <http://www.environmentalintegrity.org/pubs/EIP_BackedUp_fnl.pdf>.
[26] Id.
[27] Id.
[28] Will Hewes & Katherine Baer, *What's In Your Water: The State of Public Notification in 11 U.S. States*, American Rivers (2007) available at: http://www.americanrivers.org/site/DocServer/arswg.all.8_16_07_opt.pdf?docID=6521.

State Requirements for Public Notification are Variable Where They Exist

Lack of federal requirements for sewage right to know leaves a huge gap that states have not filled. American Rivers has recently completed an analysis of sewage overflow public notification requirements in 11 states and only one state, Maryland, had a strong program to protect public health. Most states reviewed had either no public notification requirements for sewage spills or selective or sporadic notification.[29] In South Carolina, Tennessee, Kentucky, and Virginia, there are effectively no statewide public notification requirements.[30]

Analyses for the Great Lakes states and Florida have revealed similar patchwork results, showing that state policies are insufficient to protect public health. In the Great Lakes, of the eight states evaluated, only Michigan received a grade for sewage spill notification higher than a B, and most states were graded with Cs and Ds.[31] Ohio was rated so poorly as a D-, that state legislation for sewer overflow notification has been introduced.[32] Even in Michigan, where reporting requirements are strong, both CSOs and SSOs have been underreported.[33] Likewise in Florida, there are no requirements for public notification.[34]

In some states that are not notifying the public and protecting public health, selective communities may be doing a good job. In Tennessee and Kentucky, specific legal action has prompted excellent public notification programs for some communities. Northern Kentucky's Sanitation District Number 1, which has a model notification program, came under a consent decree in 2005 after repeated Clean Water Act violations.[35] The consent decree required, among other things, public notification of sewer overflows, and the District has initiated an ambitious program to accomplish that goal, sending email alerts,

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[29] *Id.*

[30] *Id.*

[31] U.S. PIRG, *Sewage Warning! What the Public Doesn't Know About Sewage Dumping in the Great Lakes* (2005) http://www.uspirg.org/uploads/Ua/Qv/UaQvrW3J9SnuUtufivHbsw/sewagedumping.pdf.

[32] Ohio HB 235 (2007).

[33] Clean Water Action & Clean Water Fund of Michigan, *Wasting Our Water Wonderland* (2001) <http://www.cleanwaterfund.org/pdf/cso_mi.pdf>.

[34] Clean Water Fund Florida, *Are We Wading in Waste: Florida Sewage Overflows* (2005). Available: http://www.cleanwaterfund.org/pdfs/SewageReportFinal.pdf.

[35] *The Commonwealth of Kentucky vs. Sanitation District No. 1 of Northern Kentucky* (2005). Available: http://www.csop.com/WWPWebDocuments/Consent%20Decrees/Kentucky%20Sanitation%20District%201,%2010-12-2005%20CD.pdf..

maintaining a phone hotline to inform residents of CSOs in their area, issuing proactive advisories based on rainfall, and diligently posting warning signs near all CSO outfalls.[36] In Tennessee, the City of Knoxville now has a strong notification program resulting from a citizen's lawsuit in response to the city's poor record on reducing overflows and notifying the public, including posting the site, issuing media advisories, maintaining web information, and distributing door hangers.[37] These thoughtful procedures to safeguard public health should be the rule, and not the exception.

Examples from around the country also highlight the real, on-the-ground effects from failing to monitor sewer systems and notify the public. For instance:

- In Tampa Bay, Florida, residents were unaware that 200,000 gallon of sewage had spilled from a broken pump station into a ditch that connects to Tampa Bay.[38] Local residents were not notified and one said: "If there's something hazardous that could affect our family or sons, anybody human, they should definitely put a warning or come and tell us or notify somebody that something has [gone] wrong." Another person whose home backs up to the ditch said, "I'm not happy about it. They should have told us, I had no idea until you [the media] came and told us. They should let us know." [39]
- Near Fredericksburg, Virginia, residents also were unhappy to find out about health risks from a sewage spill in their stream after the fact. Said one parent whose children had been playing in Massaponax Creek, home to repeated sewage overflows, after a recent spill: "We're not the only people who play in the creek. Every time I go down there, there are teenagers and dogs swimming in the creek,"

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[36] Sanitation District No. 1, Overflow Notification, http://www.sd1.org/wastewater/overflow.asp.
[37] Tennessee Clean Water Network v. Knoxville Utilities Board. Available: http://www.tcwn.org/pdf/TCWN_Complaint-v-KUB.pdf and see Knoxville Sewer Overflow Response Plan, 2004, http://www1.kub.org/newsite/epa/sorp_report.pdf.
[38] *Sewage Spills Into the Bay*, MyFox Tampa Bay, June 3, 2007. Available at http://www.myfoxtampabay.com/myfox/pages/News/Detail?contentId=3387556&version=1&locale=EN-US&layoutCode=TSTY&pageId=3.2.1.
[39] *Id.*

she said. "I'm very upset that the county waited this long [to alert residents] and there are potential health risks to our whole family now."[40]

In summary, state policies for public notification are inconsistent at best. Given the complete lack of public notification in a number of states, a minimum nationwide standard, as required under H.R. 2452, is essential to provide consistent protection for public health.

III. H.R. 2452 Provides A Straightforward, Common-Sense Approach to Protecting Public Health

To improve the public's access to information about sewage spills, federal sewage overflow notification requirements must be improved. Stronger federal requirements for monitoring and notification in H.R. 2452 would establish a minimum standard that all permittees must meet. This would provide an enforceable and consistent baseline that states may not fall below, providing a safety net for all Americans. Given the complete lack of public notification in a number of states, such a minimum standard is essential.

H.R. 2452 requires publicly owned treatment works (POTWs) to use a monitoring system, technology or management program to alert the owner or operator of an overflow. A basic monitoring system must be a central component of a POTW's notification program with the goal to provide information on most overflows for both notifying the public and allowing POTWs to prioritize upgrades and repairs. Just as cars are required to have check engine lights, wastewater treatment systems should have monitoring systems to inform them of potential problems. Monitoring is key to proper operations and maintenance, and H.R. 2452 allows systems to choose from the great range of monitoring techniques currently available.[41]

H.R. 2452 also requires POTWs to notify the public when there is a sewage overflow with the potential to affect human health. When the spill is uncontained, of a large

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[40] *Sewage Spill a Main Concern in Spotsylvania*, Dan Telvock, The Freelance Star, May 20, 2007. http://fredericksburg.com/News/FLS/2007/052007/05202007/284791/index_html?page=1.

[41] See e.g. American Society of Civil Engineers, *Protocols for Identifying Sanitary Sewer Overflows* (2000).

enough size, or in an area where people swim, wade, fish or otherwise could come into contact with untreated sewage, the public should be alerted so they can avoid the risk of becoming ill. Notification must take place as soon as practicable, but not later than 24 hours after the POTW owner or operator becomes aware of the spill. This timeliness component is important as notification after the fact does not protect public health.

The bill also mandates immediate notification of public health authorities and other affected entities, such as drinking water intakes when the spill may imminently and substantially endanger public health. Public health agencies and drinking water suppliers need warning when there is a serious spill to best take action to prevent waterborne illness outbreak. Public health agencies are also best equipped to monitor and track health effects.

Another critical component of H.R. 2452 is that POTWs must report overflows to the permitting agency within 24 hours and follow up with a written report in five days to more fully describe the overflow, its causes and solutions. An annual report summarizing these overflows is also required to summarize the amount of sewage spilled, duration, and mitigation efforts. These reports are important to more fully understand the extent of overflow problems for a system. By increasing transparency, it will be more clear where investments must be targeted and at what level.

Finally, H.R. 2452 allows EPA's clean water state revolving loan funds to be used to carry out these functions.

IV. Select States, Cities, and Utilities Already Notify the Public

Despite the overall lack of public notification, there are certainly a number of states, cities, and utilities that have strong monitoring and public notification requirements. These handful of programs illustrate that notification is feasible and that there are a number of ways to achieve meaningful public outreach. H.R. 2452 allows each state or community to tailor a program to best reach the local population. Notification is not

intended to be one-size-fits-all, and should be designed with the end goal of protecting public health in the most effective way possible.

There are a variety of public notification methods that can be used separately or in combination to reach the broadest possible audience in a timely manner. Public health agencies should also be notified, and in some states are involved in public outreach. Methods that are used include newspaper notices, radio public service announcements, phone hotlines, email alerts, website information, posting of signs, and flagging programs. In Maryland, media advisories are required for spills with the potential to affect public health or those over 10,000 gallons and POTWs must place paid advertisements in the paper to ensure publication.[42] A quicker way of reaching people is direct notification via the phone or internet. Certain counties and municipalities such as Portland, Oregon send emails to interested residents (e.g., boaters, recreational swimmers, parents with young children) when there is an overflow.[43] Others, such as Kentucky's Sanitation District No. 1, maintain a phone hotline to inform residents whether there is an overflow alert in effect.[44] Finally, the Michigan Department of Environmental Quality is required to maintain a website "promptly" listing information about sewage spills.[45] These direct notification methods can be especially effective in communicating risk to regular recreational users that are at the highest risk of contact with sewage.

Posting signs at sewer outfalls and public access points to official and unofficial recreational waters is another essential means of notifying the public of unhealthy pathogen levels. The signs should be dated and designed in such a way to ensure that they are visible to users in the water and readily comprehensible. Signs should either be in multiple languages corresponding to the local population or use universal warning symbols. Another more proactive approach to informing the public that local waterways

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[42] COMAR 26.08.10.08.
[43] Portland Bureau of Environmental Services, CSO Notification http://www.portlandonline.com/bes/index.cfm?a=115425&c=41821#summer.
[44] Sanitation District No. 1, Overflow Notification, http://www.sd1.org/wastewater/overflow.asp.
[45] U.S. PIRG, *Sewage Warning! What the Public Doesn't Know About Sewage Dumping in the Great Lakes* (2005) http://www.uspirg.org/uploads/Ua/Qv/UaQvrW3J9SnuUtufivHbsw/sewagedumping.pdf.

are contaminated can be found in Philadelphia, where the Philly Rivercast program forecasts potential pathogen levels in a portion of the Schuylkill River and uses the forecasts to make recommendations about safe use of the river.[46] It also serves as an early warning system for drinking water contamination. Using the historical relationship between water quality, streamflow and rainfall, the City can now predict bacteria levels by analyzing rainfall, streamflow and turbidity in real time and make recommendations about the safety of various recreational activities on the river and post this information on their website where it is easily accessible.

An example of an excellent state and local notification program is in Anne Arundel County, Maryland. Under state law, each Maryland County ultimately determines how it will notify the public and whether it will surpass the minimum requirements. Anne Arundel County, on the Western shore of the Chesapeake Bay, has an exemplary notification program that includes email alerts, a regularly updated website and a phone hotline. The county public health department issues beach closures or health advisories depending on the size of the spill and uses the above methods as well as engaging the local media to inform affected communities. Anne Arundel also has fliers which community service agencies may use in door-to-door notification campaigns.[47]

Given that some cities and utilities already are doing a good job of notifying the public using a variety of mechanisms, it is clear that notification is entirely feasible, and is also an important part of sound system management and community safety. All Americans deserve to benefit from the same health protections. H.R. 2452 will help to create a level playing field across the country. This will enable residents in all states to benefit from consistent, baseline public notification, leaving states and communities as always, with the ability to surpass minimum federal requirements.

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[46] See www.phillyrivercast.org. note that a similar program exists on the Chattahoochee River in Atlanta, see: http://ga2.er.usgs.gov/bacteria/.

[47] Personal communication with Sally Levine, Anne Arundel Department of Health (12/11/2006).

V. Conclusion

Sewage pollution in our waterways poses a significant health threat to the American public and the ecosystems on which they depend. Reducing the volume of sewage pollution requires innovative approaches and a significant investment of resources to meet the needs of a growing population while protecting the public's right to a safe and healthy environment. In the interim, as sewers continue to overflow on a regular basis, citizens have a basic right-to-know when it is unsafe to swim or play in local streams, rivers, lakes, and beaches. Just as we are alerted to "code red" air pollution days or of contaminated food as the case when bacteria contaminated bagged spinach was quickly pulled from store shelves, we also have a right-to-know about sewage pollution. Prevention is the best medicine as it keeps us from needlessly getting sick and saves the costs associated with medical treatment and lost work days. Timely information is a powerful first line of defense that public notification can provide.

H.R. 2452 also will ultimately help drive a reduction in sewage pollution as the public becomes aware of infrastructure problems. As one industry consultant recently stated, "Until a municipality can put numbers on the impact of sewer spills, the infrastructure doesn't get the attention it needs."[48] A basic monitoring system must be a central component of a POTW's notification program with the goal to provide information on overflows that threaten public health and allow POTWs to prioritize upgrades and repairs. POTWs are critically important for the nation's clean water, and their owners and operators work hard every day for a healthy environment. However, the public needs to be aware when their health is at risk and that more money is needed to invest in our crumbling infrastructure. Raising awareness of sewer overflows will increase public support for the financial investment necessary to reduce sewage pollution, in addition to keeping people away from contaminated water. Public notification of sewage spills is essential so that people can protect themselves and their families from getting sick, while also galvanizing support for the solutions to reduce sewage pollution.

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[48] *Infrastructure Growing Pains*, WEFTEC Update, Summer, 2007.

Thank you for the opportunity to testify on H.R. 2452. I look forward to any questions you may have.

Attachment A: *Acute and Chronic Effects from Waterborne Pathogens*

	Agent	Acute Effects	Chronic or Ultimate Effects
Bacteria	*E. coli* 0157:H7	Diarrhea	Death, Hemolytic Uremic syndrome
	Legionella pneumoniae	Fever, pneumonia	Elderly: death
	Helicobacter pylori	Gastritis	Ulcers and stomach cancer
	Vibrio cholerae	Diarrhea	Death
	Vibrio vulnificus	Skin and Tissue infection	Death in those with liver problems
	Campylobacter	Diarrhea	Death: Guillain-Barré syndrome
	Salmonella	Diarrhea	Reactive arthritis
	Yersinia	Diarrhea	Reactive arthritis
	Shigella	Diarrhea	Reactive arthritis
	Cyanobacteria	Diarrhea	Potential Cancer
	Leptospirosis	Fever, headache, chills, muscle aches, vomiting	Weil's Disease, kidney damage, liver failure, death
	Aeromonas hydrophila	Diarrhea	
Parasites	*Giardia lamblia*	Diarrhea	
	Cryptosporidium	Diarrhea	Immunocompromised: death
	Toxoplasma Gondii	Newborn syndrome, hearing and visual loss, mental retardation	Dementia, seizures
	Acanthamoeba	Eye infections	
	Microsporidia	Diarrhea	
	Entamoeba cayetanensis	Amebiasis, amoebic dysentery, abscess in liver or other organs	
Viruses	Hepatitis viruses	Liver infection	Liver failure
	Adenoviruses	Eye infections, diarrhea, respiratory disease	
	Caliciviruses	Diarrhea	
	Coxsackieviruses	Encephalitis, Aseptic meningitis	Heart disease, diabetes
	Echoviruses	Aseptic meningitis	
	Polyomaviruses		Cancer of the colon

Adapted from Rose et al., (1999) and US EPA (2002)[49]

[49] Rose, Joan et al. *Microbial Pollutants in Our Nation's Water: Environmental and Public Health Issues.* Washington, DC: American Society for Microbiology, 1999; U.S. EPA, Summary of Aug.14-15, 2002. Experts Workshop on Public Health Impacts of Sewer Overflows, November 2002, p. 9.