

# Sewage: An Unseen Threat



## Key Points

Untreated sewage contains a wide array of pathogens, chemicals and nutrients, many of which pose a serious threat to human health.

Sewage pollution is a growing problem as funding for infrastructure decreases, old pipes crumble and urbanization increases stormwater runoff.

We must strengthen state and federal public notification laws so that all Americans are informed of this serious health threat.

## Key Statistics

There are 7.1 million mild-to-moderate cases and 560,000 moderate-to-severe cases of infectious waterborne disease in the United States each year.

The EPA estimates that there are 23,000-75,000 SSOs annually.

Over 850 million gallons of untreated sewage overflows from combined sewer systems every year.

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## The Health Risks of Untreated Sewage

Sewage in our water is one of the United States' most widespread – and most misunderstood – environmental and public health problems. Sewage spills threaten drinking water supplies, spoil recreation, hinder economic values, and harm wildlife. In general, the American public is profoundly unaware that poorly treated and raw sewage is often allowed to overflow and spill into our streams, rivers, and lakes, threatening water supplies and human health. Outdated sewage treatment infrastructure, population growth, sprawling development, and a severe shortage of funds for new sewers and treatment facilities are all resulting in a silent, but growing problem.



*Courtesy of US EPA*

## A Danger to Public Health and the Environment

The public health and environmental implications of sewage overflows are tremendous. Sewage pollutes our waters with bacteria, excess nutrients, heavy metals, and other toxins. It kills aquatic life and creates algal blooms that can suffocate fisheries. Even worse, sewage carries pathogens that can end up in our drinking water supplies and recreational waters. These disease-causing microorganisms cause diarrhea, vomiting, respiratory and other infections, hepatitis, dysentery, and other chronic diseases such as cancer, arthritis and heart disease. While most people recover from these diseases, they can be deadly for children, the elderly, and others with weakened immune systems, such as cancer patients.

## A Perfect Storm

According to the EPA, over 860 billion gallons of untreated sewage escapes from our sewer systems every year. Much of this sewage ends up in our rivers and streams. The situation is only getting worse. A combination of several factors has created a “perfect storm” for America’s sewage treatment capacity:

### Crumbling Infrastructure

In the 1970s and 1980s, America invested heavily in wastewater treatment. Over the years, however, new investment has decreased. As a result, the average American sewage pipe is 33 years old, with many pipes dating back 50 or even 100 years. Many of these aging sewer systems are full of cracked and broken pipes. Sewage leaks out of pipes, contaminating watersheds, while stormwater and groundwater leak *into* pipes, overburdening sewage treatment facilities and causing discharges of untreated sewage.



*Courtesy of US EPA*

### Sprawl and Population Growth

While this old infrastructure continues to fall apart, population growth and sprawl development are rapidly outpacing the development of new sewage treatment capacity. New development paves over the farms, forests, and wetlands that naturally soak up stormwater. As a result, rain and snow that would have naturally drained into the ground or slowly run off the land into streams now gets diverted through culverts, often discharging directly into

public sewage systems where it combines with sewage and domestic wastewater. Even cities with separate sanitary sewers find that stormwater can flow through cracks and manhole covers into pipes that carry human waste, causing overflows. All of this increases the volume of wastewater that must be treated. Community sewage treatment facilities – already struggling to keep up with rapidly growing populations – are often overwhelmed. Heavy rains can overload pipes and treatment facilities, causing sewage to flow into waterways and basements.

### A Chronic Lack of Funding

Despite the obvious risks, these sewage problems are largely ignored. Federal, state, and local wastewater treatment facilities are dangerously under funded, often lacking the resources needed to fully perform normal operations and maintenance, let alone infrastructure improvements that will allow them to deal with increased sewage burdens.

According to the EPA's "2002 Clean Water and Drinking Water Gap Analysis," current spending rates will create an *annual* shortfall of \$1 to 6 *billion* over the next 20 years.



*NJ Division of Watershed Management*

### The Administration's Response: Budget Cuts and Relaxed Regulations

Rather than addressing this budget gap, the President's proposed 2007 budget *cuts* water quality infrastructure funding even further. The budget for the Clean Water Act State Revolving Fund (which gives states money for low-interest loans to communities for sewers and treatment plants) is cut by over a third: from \$1.34 billion in FY 2004 to only \$680 million in FY 2007. Additionally, the budget reduces the funding available to states and municipalities for improving stormwater systems and reducing pollution in rivers and streams.



*Courtesy of City of Austin, Texas*

Rather than providing communities with funds and a financial incentive to upgrade their sewage treatment systems, the Administration proposed to "solve" the problem by removing protections that keep untreated sewage out of our water supply. The EPA proposed a policy that would sanction the "blending" of fully and partially treated sewage during periods of heavy rainfall or snowmelt, circumventing the biological treatment that eliminates disease-causing germs or viruses – the standard since passage of the 1972 Clean Water Act. Fortunately, public outcry forced EPA to rescind this policy.

The Administration also shelved proposed regulations that would have required publicly owned treatment works to notify the public and local public health departments when a sanitary sewer overflowed and placed communities at-risk. Rather than giving people a right-to-know when local water are unsafe for swimming and boating, the administration erred on the side of secrecy.

### Cleaning Up the Mess

Cutting wastewater funding and relaxing water quality protections will only increase the environmental and public health problems associated with sewage overflows. Instead of exemptions like the EPA's blending policy, communities need long-term infrastructure funding that will allow them to adequately treat their wastewater. Other solutions abound as well. Communities can use low-impact development methods that reintroduce stormwater into the natural water cycle instead of dumping it into overburdened sewer lines. Smart suburban growth policies can direct development to areas with existing sewage treatment systems, rather than extending infrastructure into the countryside.

American Rivers is working to reverse the perfect storm that is resulting in increased sewage in our rivers and streams. We worked to mobilize the grassroots river community to defeat the Administration's policy of reducing **sewage treatment obligations**. We are seeking significant **increases in funding** for stormwater and wastewater infrastructure improvements in the FY2008 federal budget and beyond. We are advocating for non-structural **stormwater solutions** that reduce stormwater runoff (such as permeable pavement, green roofs, and rain gardens) through federal water infrastructure legislation, and working in the Great Lakes region and nationally to urge communities to use these non-structural approaches as a central component of their **stormwater management plans**, mandated by federal Clean Water Act regulations. And, we are advocating for consistent **notification requirements for sewage spills** so people will know when it is unsafe to swim and play in the water.