

other priorities. As they say, an ounce of prevention is worth a pound of cure.



Third, untreated sewage can have a direct impact on public health and the environment. Indiana's sewage problems affect the multi-billion-dollar tourism, fishing, and boating industries on local rivers and lakes. The potential impact reaches as far away as the Gulf of Mexico, where pollution from throughout the Mississippi River basin (which contains Indiana) has created the "Dead Zone", an area of the Gulf that is too polluted to sustain marine life.

Public health suffers as well. The Indiana State Department of Health identifies these and other sewage-related diseases. Where data is available, the number of cases in Indiana in 2000 is listed in parentheses.

- Campylobacteriosis (591 cases)
- Cryptosporidiosis
- E. coli Diarrhea (131 cases)
- Encephalitis
- Gastroenteritis
- Giardiasis (515 cases)
- Hepatitis A (132 cases)
- Blue Baby Syndrome
- Salmonellosis
- Shigellosis (1,588 cases)
- Typhoid Fever

A report by the United Nations showed estimates that the economic impact of waterborne diseases in the United States is between \$3 billion and \$22 billion per year in medical bills and lost productivity.

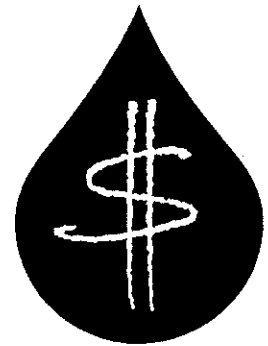
Statistics cited by the American Society for Microbiology at a 1998 Office of Economic Cooperation & Development (OECD) conference indicate that:

- A mild case of diarrhea can cost up to \$280 in lost productivity and over-the-counter medicines.
- A more severe episode can cost up to \$8,000 per person for medical diagnosis and treatment.
- The 1993 Cryptosporidium outbreak in Milwaukee cost the community over \$55 million.

The true cost of improper wastewater disposal must incorporate the ultimate cost of endangering the environment and our health. When water isn't properly treated, people pay!

Want more information about how to fix wastewater problems in your community? Contact the Indiana Rural Community Assistance Program at (800) 382-9895, or visit our website at www.incap.org/indianaRCAP.htm.

Costs to Consider:



Septic Systems vs. Sewer Systems in Rural Indiana

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Program
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Sewer systems vs. Septic Systems

Sewer systems: a costly burden on rural communities. Septic systems: free wastewater treatment. Right? Not necessarily.

While a properly installed and maintained septic system can serve a household for years, many of the costs associated with individual wastewater treatment systems are overlooked. Because the costs don't come in the form of a monthly bill, many homeowners assume that a sewer system will always be harder on the pocketbook than a septic system.

As the cost of new sewer systems continues to rise, the ever-increasing monthly bill is a growing source of strife between the residents who will pay it and the local officials who realize that their community can no longer rely on septic systems to treat their wastewater. Soils may be unsuitable, lots too small, or the volume of flow in the area may simply require a more centralized treatment option. In any case, it may be helpful for residents concerned about bills to consider the following information.

Direct Costs to the Homeowner



So what are the direct costs associated with septic and other on-site systems? Costs can include:

- 1) System installation: The Minnesota Extension Office estimates that installation costs for most household septic systems are between \$3,000 and \$10,000. Other estimates put installation costs as high as \$16,000 for certain systems.
- 2) System maintenance: Estimates range from \$30 to \$500 per year for a conventional household septic or mound system. For more complicated on-site systems like constructed wetlands and media filters, maintenance costs can range up to \$1,700 per year.
- 3) Replacement: If a system fails, a homeowner could face replacement costs ranging from \$2,000 to \$4,000 or more.
- 4) If a system cannot be repaired: The ultimate cost to the homeowner could be the house itself. If a system cannot be repaired or replaced, the local health department can declare a home unfit for human habitation.

Indirect Costs of Improperly Treated Sewage

In addition to the direct costs to the homeowner, failing septic systems can have indirect costs that can impact the entire community.

First, the absence of adequate infrastructure, including sewer systems, can restrict a community's ability to sustain or increase its population and attract or retain businesses. This can in turn keep a community from making other improvements like downtown rehabilitation.

Second, the presence of wastewater problems—especially those that are under enforcement action—can divert money from other community projects and priorities. Even with federal funding, communities are usually required to invest money in planning activities and must provide local matching funds.

In 2002 and 2003, the Indiana Department of Commerce awarded nearly \$30 million in grants to communities for water quality-related projects. These grants didn't just divert money from non-water-quality projects. In addition, they required \$3 million in local matching funds—money that could potentially have been spent on other community improvements! In other words, the longer water quality problems persist, the greater potential they have to divert resources from