Regional Water Management
Task Force

Rural Water Challenges

Water issues in Southwestern Pennsylvania's rural areas may get less public attention than urban flooding and sewage problems, but an imposing combination of factors makes our region's rural water challenges just as tough as the urban ones.

Abandoned Mine Drainage

Hundreds of mines that stopped providing coal decades ago still are polluting our environment daily. Water flows through these mines and undergoes chemical reactions with the rocks and minerals exposed by coal extraction.

This mine-polluted water turns streams orange, kills aquatic life, threatens residents' drinking water sources, and hampers rural economies by making fishing—for sport or for dinner—impossible.

Western Pennsylvania is laced with abandoned mines whose drainage has contaminated an incredible 2,800 miles of streams in our region alone.

Numerous innovative projects are finding ways to treat mine drainage either actively (by dispensing material that neutralizes the polluted water) or through less-expensive passive treatment methods (such as diverting the mine drainage through organic matter and crushed limestone). When mine drainage treatment is properly implemented, cleaned water and sediment then can be drained into natural waterways or put to other positive use—in sewage treatment, as a coolant at electric power plants, in manufacturing paint pigments, or even for drinking.

Photo courtesy of Stream Restoration Inc.

Federal legislation passed in December 2006 should greatly increase the funding available for abandoned mine drainage (AMD) cleanup.

The nation's first use of U.S. Environmental Protection Agency Clean Water State Revolving Fund money for an abandoned mine project occurred in Greene County, Pa. The $4.3 million loan, approved by the Pennsylvania Infrastructure Investment Authority (PENNVEST), aided construction of an acid mine drainage treatment facility that not only protected surface waters but also permitted an existing mine to be reopened. The project received a national award for innovative and successful use of federal grant funds.

Septic System Failures

Three-fourths of Southwestern Pennsylvania homes are connected to public sewer systems. When residents flush their toilets or wash their clothes, the wastewater flows through pipes that lead eventually to a sewage treatment plant.

In contrast, about one-fourth of the region's homes rely on private septic systems to treat their wastewater. Traditional septic systems send the water through an on-site tank and then into the soil. But because Southwestern Pennsylvania soils are unsuitable for traditional systems, most homes have alternative systems that disperse the sewage in gravel, sand, or peat.

These alternative systems are costly, require careful maintenance, and frequently fail. These failures are a major reason why a recent Regional Water Management Task Force poll found that 41 percent of Southwestern Pennsylvania residents now using a septic system would rather be on a public sewage system. However, extending sewer lines to sparsely populated areas is extremely expensive.

Wildcat Sewers

Even worse, an estimated 27,000 homes in Southwestern Pennsylvania have no sewage treatment system at all. Instead, they rely on so-called "wildcat sewers"—which is a nice way of saying their sewage is piped directly into nearby ditches and streams without treatment. Wildcat sewers are illegal but hard to eliminate, especially in view of high retrofitting costs, the relatively low incomes of many affected families, and the lack of access to nearby public sewer systems.

Wells—Or Sometimes Not-So-Wells

Fifteen percent of Southwestern Pennsylvania homes get their drinking water from private wells. Unfortunately, for many of these residents, the pleasant thought of natural, fresh well water has given way to the reality of contamination from mine drainage, agricultural operations, wildcat sewers, or nearby industrial activity. As a result of these and other contaminants, about 6 percent of Southwestern Pennsylvania residents who have had their well water tested found that the water is not safe to drink.

What Can We Do?

County conservation district staff, watershed organizations, agricultural extension offices, sewage enforcement officers, and Pennsylvania Department of Environmental Protection professionals all have provided valuable assistance to many Southwestern Pennsylvania residents facing water quality problems. Many people believe, however, that greater regional coordination of these and other resources could help us solve our problems more quickly and effectively. Benefits of such coordination might include the following:

- Regional alliances or organizations to advocate for and make effective use of AMD funding
- Data monitoring to identify and address the most serious water quality problems
- Easier access to technical assistance for homeowners and communities whose drinking water quality or sewage treatment capacity is at risk
- Greater support for watershed organizations and other local groups working to protect and restore waterways
- Improved planning and decision making where existing sewage treatment is inadequate and expansion of public systems is under consideration
- Development of decentralized systems that can treat sewage closer to where it is produced and reduce the need for expensive new sewer lines
- Completion of an inventory of wildcat sewers
- Development of a regional plan for rural water protection and improvement

With wise investments and thoughtful planning, Southwestern Pennsylvania's rural residents can enjoy clean water for drinking, daily activities, and the recreational opportunities that help to make these communities so attractive.

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