

Berks water issue becoming more than a drop in bucket

By Charles C. DuBois
and William Casey
Reading Eagle

It seems alarmist to even call water an issue, but maintaining a pure and plentiful supply was recently identified as "America's next great domestic crisis" — one prompting some in Berks County to seek a concerted, comprehensive effort to find answers.

The water issue is complex and one that is, quite literally, fluid — changing with the latest rainfall; the seep of leachate from some forgotten dump; the swing of politics; public funding priorities; the legacy of old building practices; and, of recently growing concern, the spread of new housing.

"Development without carefully considering its effect cannot only lead to contamination of a local supply, it can also lead to a drop in it," said Dennis G. Collins, executive director of the Berks County Conservancy.

Headlines provide seemingly endless spikes of concern over water. Among the most recent news were these items:

✓ Tests reveal in April that 36 percent of the wells in Shartlesville were contaminated with coliform bacteria.

✓ Eighty-five residents of the Shady Lane Mobile Home Park, Alsace Township, in June were urged to boil their water after "significant amounts" of coliform bacteria were discovered.

✓ The Concerned Citizens of Western Berks County announced July 28 they will sue the current and former owner of the Berks Sanitary Landfill in Spring Township, for violation of air and water pollution laws.

✓ During recent years, residents in Bally Borough and Longswamp and Robeson townships discovered their water supplies were contaminated by toxic chemicals and heavy metals.

✓ Hamburg Borough was forced to drain a 1.5 million gallon reservoir because of bacterial contamination.

✓ Kutztown, weathering a drought in 1981, was clouted when a major deep well was tainted by a leak from an underground gasoline tank.

According to the state Department of Environmental Resources 60 percent of the wells in Pennsylvania are polluted. One survey in Berks shows that 25 percent of the wells sampled were tainted.

The director of a local laboratory says 20 percent of well water tested for bacteria fail to meet standards and another one to two percent fail to meet nitrate standards.

"There used to be a time when people thought everything that came out of the ground was

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◆ Continued from Page A-1

good," said Richard C. Stump, laboratory director at Suburban Water Testing Labs, 4600 Kutztown Road, Temple. "It's not so."
"Water isn't free," said Clyde A.B. Myers, Berks Cooperative Extension agent and an advocate of a countywide approach to the problems of water. "... we have taken water for granted."

Water is a precious and fragile resource, Myers said, one that costs money to obtain, to keep pure, and to distribute.

Protecting current supplies and assuring enough to meet future demands is becoming more and more important, say those close to the matter.

Concern about water supplies, within the past year, has prompted officials in Cumru and Brecknock townships to amend zoning regulations to increase minimum lot sizes in areas where wells are used.

Such moves are seen as a way to avoid overtaxing subsurface water sources and to prevent pollution from on-site sewage disposal systems.

Next month, Exeter Township supervisors are expected to receive a comprehensive water resource report from Dr. Madan M. Varma, Kutztown State University professor of physical sciences.

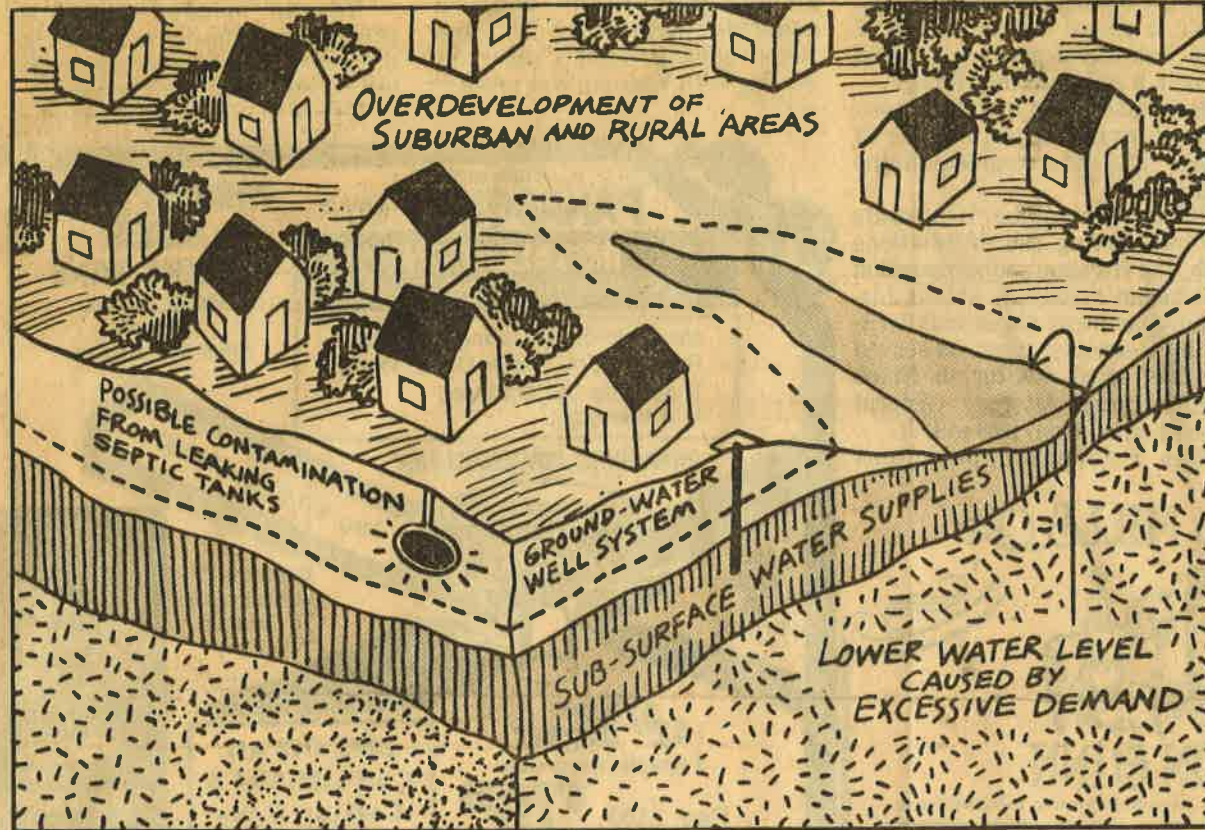
VARMA'S STUDY will indicate where underground water supplies are best and where they are more limited due to geological and topographical conditions, according to township manager Richard D. Fisher, who has been briefed on the work. The study may provide an informational aid for developers.

Berks countians tap into a variety of water sources.

Most recent figures show that 68 percent of the local population is connected to some sort of public water system, according to Glenn R. Knoblauch, principal county planner, up from 60 percent in 1963, but down from 70 percent recorded in 1970.

Some of the largest public water systems in Berks — like the city and the Western Berks Water Authority — use surface sources.

Western Berks, for example, draws 3.5 million gallons of water a day from Tulpehocken Creek,



George M. Arentz/Reading Eagle

Pollution, drought, and the advance of new housing are just facets of a complex water issue.

Muhlenberg, the second oldest authority in the state, has a system that draws on 12 active wells, according to Wilbur T. Latshaw, chairman and long-time member of the authority. The wells are located throughout the township with more in the western part of the municipality.

Robert T. Walborn, Muhlenberg system manager, said Muhlenberg provides an average of 4.2 million gallons of water a day for its 5,852 residential, commercial, and industrial customers in the township, Laureldale Borough, and a portion of Alsace Township.

Citizen's provides 4.8 million gallons of water a day to 6,803 customers in Wyomissing Hills, West Lawn, Sinking Spring, and portions of Spring, Lower Heidelberg, Heidelberg, and Cumru townships, according to system manager Albert Wyda.

The utility depends on 10 operating wells and has another due to come on-line by next year, he said. The wells are scattered throughout Citizen's distribution area.

the development from two deep wells which have an established safe yield of 432,000 gallons per day. One well is located off Lake-wood Drive, the other off Flying Hills Drive.

In operation since the building of Flying Hills began in 1972, the system never has experienced well or capacity problems, Haas said.

In fact, Berkshire Greens had considered running a supply line from Flying Hills to the site of the proposed 450-unit Deerfield development near the intersection of Philadelphia Avenue and Route 10.

An on-site well and storage system had been considered, Haas said, but concern developed about supply adequacy and the impact of draw-down on existing homes in the area.

He said talks with city officials about a water supply for Deerfield now are moving ahead.

Beyond the reach of these larger systems is a combination of smaller municipal systems, community water systems that supply

and water systems are used frequently, according to Collins.

The most frequently cited example of what can happen in these areas is the Shartlesville case.

Prompted by word that septic systems may have been tainting wells in the Upper Bern Township community, tests were conducted.

They revealed that water from 40 of 108 wells in the small, rural village contained bacteria, some of which was identified with fecal contamination.

Myers is currently conducting a survey to determine what Shartlesville residents want to do about the problem. Upper Bern supervisors have agreed to the creation of a committee to explore other options.

It has been estimated that a full-scale public water system for the 135 homes in Shartlesville would cost \$920,000 — a daunting amount. Myers noted, particularly since many of the residents are retired.

HE ASSERTS THAT the problem is not confined to Shartlesville

improve a system before a crisis is reached.

According to Wyda of Citizen's Utility, developers generally contact the water supplier in advance to assure that they will have enough water for the homes they plan to build.

The utility, in turn, takes this information into account when determining future needs and plans for additional wells or lines.

"We try to stay a year or two ahead," Wyda said.

But, according to Muhlenberg's Latshaw, some water systems have not operated that way.

Hesitant to raise rates for needed improvements, he said, utilities have waited until an emergency arose and then were forced into a crash improvement program.

"They're planning for today and not tomorrow," said Latshaw.

Aggravating the situation is that financial help for water systems is drying up. Available state aid is limited.

"THE GENERAL RULE of thumb is you need to be a polluter to get funding," said planner Knoblauch wryly.

Sometimes even planning ahead doesn't help, as in the case of Kutztown.

Donald Sheetz, borough superintendent, said a second deep well for the Kutztown system was in the projections when the crisis hit in 1981.

An underground gasoline tank storage leaked, contaminating the existing borough deep well. At the same time, an extended dry period had driven down the water table, putting a squeeze on the amount of water available from the two borough shallow wells. Water-use restrictions had to be imposed.

Part of the water problem in Berks may stem from regulatory gaps.

In some instances, the state Department of Environmental Resources regulates the water system, sometimes the Delaware River Basin Commission steps in, and at other times local municipalities have jurisdiction.

In Collin's mind, the setup does not provide for adequate protection of water supplies.

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Collins said, "We're going out to the municipalities and telling them we have the information and a mapping program — information that they don't have plugged into their planning process right now."

The county developed a master sewer and water plan during the 1970s, but according to Knoblauch, its primary emphasis is on sewage.

In addition, Collins said, despite the fact that 73 of the 75 county municipalities have adopted the plan, many still do not have public sewer or water systems.

Another approach for Berks may be one adopted in Chester County, where a comprehensive effort has been made in an attempt to balance water supplies and development.

David Yaeck, executive director of the Chester County Water Resources Authority, said his agency reviews plans for building projects and makes recommendations to avert land uses which may overtax the water supply.

THESE NON-BINDING recommendations are made by the authority based on a five-volume "Water Resources Inventory Study." The work is an in-depth look at watersheds in Chester as well as at the geology of the county.

Based on this and other data, officials have projected a set of scenarios to show the impact of different levels of development in a given area of the county.

The program is one of the few in the state, Yaeck said.

While a similar project could help Berks address its future needs, it wouldn't cure the problems in the Shartlesvilles or other water-related problems.

Myers is one who strongly advocates the creation of a committee or task force to thoroughly address the issue of water.

"I don't think we have any countywide strategy for water," he said.

Myers said representation on the committee should come from local, state, and federal agencies with jurisdiction over water; the business and manufacturing community; the extension service; citizens; drillers and others in the water supply business; geologists

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Such moves are seen as a way to avoid overtaxing subsurface water sources and to prevent pollution from on-site sewage disposal systems.

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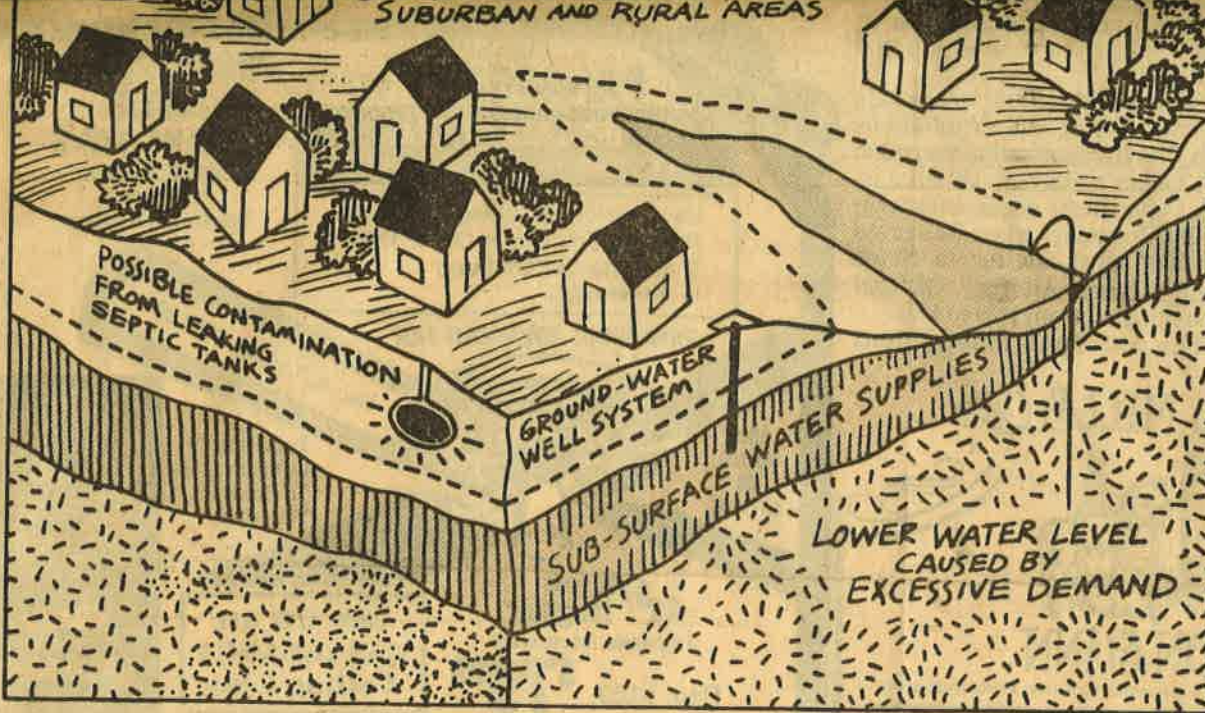
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Some of the largest public water systems in Berks — like the city and the Western Berks Water Authority — use surface sources.

Western Berks, for example, draws 3.5 million gallons of water a day from Tulpehocken Creek, treats it at a plant in Lower Heidelberg Township, and pipes it to 25,000 customers in Shillington, Wyomissing, West Reading, Mohnton, and parts of Spring and Cumru townships.

A NUMBER OF OTHER public systems — including the Muhlenberg Township Authority and Citizen's Utilities Water Co. — use wells.



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The utility depends on 10 operating wells and has another due to come on-line by next year, he said. The wells are scattered throughout Citizen's distribution area.

SOME RESIDENTIAL developments in Berks, like Flying Hills in Cumru Township, have their own private water well systems.

Jeffrey W. Haas, of Berkshire Greens Inc., developer of Flying Hills, said the Flying Hills Water Co. supplies 143,000 gallons of water a day to 1,150 customers in

the development from two deep wells which have an established safe yield of 432,000 gallons per day. One well is located off Lakewood Drive, the other off Flying Hills Drive.

In operation since the building of Flying Hills began in 1972, the system never has experienced well or capacity problems, Haas said.

In fact, Berkshire Greens had considered running a supply line from Flying Hills to the site of the proposed 450-unit Deerfield development near the intersection of Philadelphia Avenue and Route 10.

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Beyond the reach of these larger systems is a combination of smaller municipal systems, community water systems that supply a trailer park or small development, and individual wells.

According to extension agent Myers, there are approximately 30,000 home and farm wells in Berks County.

IT IS IN DEVELOPING suburban areas and rural parts of the county, where water problems — shortages and contamination — often occur because on-site sewer

and water systems are used frequently, according to Collins.

The most frequently cited example of what can happen in these areas is the Shartlesville case.

Prompted by word that septic systems may have been tainting wells in the Upper Bern Township community, tests were conducted.

They revealed that water from 40 of 108 wells in the small, rural village contained bacteria, some of which was identified with fecal contamination.

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It has been estimated that a full-scale public water system for the 135 homes in Shartlesville would cost \$920,000 — a daunting amount. Myers noted, particularly since many of the residents are retired.

HE ASSERTS THAT the problem is not confined to Shartlesville and may afflict numerous other old, small Berks hamlets — ones where hand-dug wells still exist, where septic systems may have no drain fields, and where lots are small and buildings are close to one another.

Another difficulty officials are seeing is an occasional lack of planning for future water use or an inability to expand or to

city, developers generally contact the water supplier in advance to assure that they will have enough water for the homes they plan to build.

The utility, in turn, takes this information into account when determining future needs and plans for additional wells or lines.

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IN ADDITION, THERE have been incidents in which developers, mobile home park operators, and others with small water systems, have attempted to skirt regulations and have been the targets for DER action.

A solution to part of the water problem in Berks is to gather available resource information and make sure it is used by officials.

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Myers said representation on the committee should come from local, state, and federal agencies with jurisdiction over water; the business and manufacturing community; the extension service; citizens; drillers and others in the water supply business; geologists and hydrologists; and water testing laboratories.

Among key matters for the group to address, he said, are ways of dealing with drought and contamination, location and protection of watershed and recharge areas, education of citizens on wells and septic systems, and ways to provide adequate water