

# The LEADER OPINION

FRIDAY | JANUARY 27 | 2012 | PAGE 4A

GUEST VIEW | JEAN WOSINSKI

## Don't let drillers tap our water

I write to join three or four others of your readers who have expressed concern regarding possible sale of water supplies to well drilling operators in Pennsylvania. I am aware that the Susquehanna River Basin Commission has decided that the "aquifer" which supplies Painted Post and Corning is sufficiently generous to allow both municipalities to engage in this commerce and so it is with that Commission that I must disagree. I rely upon my college professors, my five years with the Water Resources Division of the U.S. Geological Survey and my familiarity with the local geology to judge them in error.

There is no "aquifer" in the traditional sense that provides our local water. The village and the city lie in a valley which is downstream from a network of valleys, all of which have been at least partially filled with glacial deposits. These deposits are our "aquifer."

The deposits consist of sands, gravels, clays and boulders left behind by the melting of glacial ice, which had been forced into this part of what is now New York state from the Canadian Shield. Snow there had accumulated to such great depth that over the years its own weight converted it to ice. That weight – pressing down and outward – caused it to slowly flow across the landscape as if it were thick pancake batter flowing across a hot grill. As it crept and scraped along in this direction, it brought here whatever loose soil and rock had stuck to it.

Generally, the ancient pre-glacial network of north-flowing rivers and streams still remains, buried or only partially filled with well worn soils and sands and rock debris from Canada and northern New York. "Valley fill," as it is called, yields water readily because it is full of billions of small voids which rain water can occupy and which allow the water to flow, as if from a sponge. It is that network of valleys, partially filled with loose glacial material of a wide range of grain size, (from clay and sand to huge boulders), which the Susquehanna River Basin Commission considers as being our "aquifer."

In contrast, the flat-lying, gray shales and sandy limestone of Devonian age which underlies our generally hilly landscape, sometimes yields fossils but it does not like to yield water. In fact, our bedrock is about as unhappy yielding water as the Marcellus Shale is of yielding natural gas.

A classic aquifer is a broad formation which is composed of porous material, (ideally sandstone), which can absorb rainfall and through which that water can flow to wells and to streams and lakes, for our use. Instead, our broad bedrock formation is stingy – tightly holding what little water it contains. But, fortunately enough, its rough topography was swept across by a very dirty glacier four times in the last few million years. Its ice melted and left behind a spongy network for us to stick our straws, (our wells), into. It works well for us, (no pun intended), but it is not the broad expanse of a classic "aquifer." It is a limited network of narrow debris-filled valleys in a region where rainfall is sometimes very generous and sometimes very stingy. We have witnessed, this past year, exactly how fickle our rainfall can be.

The Susquehanna River Basin Commission has misjudged the character of our local geology and the nature of our water supply. They have ill-advised our local municipalities. We should, with urgency, request of our city officials that water from our limited "aquifer" not be shared or sold to operators of gas drilling outside our area and across state boundaries. Pennsylvanians will have their opportunity to use the Susquehanna River water downstream, after the Chemung has joined it in Waverly and Sayre and Athens, Pa. If we have "surplus" water, it's readily available to them there.

■ Jean Adair Wosinski is a Corning resident.