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By Peter Mantius

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Marcellus Watch: Selling an aquifer, at what cost?

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If a mining company wants to get off the hook for its legal responsibility to protect a Genesee Valley aquifer that faces imminent ruin, should state officials allow it for a price?

If so, how much should they charge and who gets the cash?

Those questions may be answered by the end of the year when Livingston County officials vote on a plan to share with the state a proposed $20 million payment from AkzoNobel Inc.

The at-risk underground water supply, the deepest of three aquifers in the Genesee Valley, is threatened by super-salty brine leaking from Akzo's former Retsof salt mine.

Retsof, once the largest salt mine in North American, had been in operation for more than 100 years when it collapsed near Cuylerville in March 1994. Water from an aquifer closer to the surface rushed in, while land above the mine sank several feet, damaging roads and bridges.

Several years later, state officials found that brine from the flooded mine was seeping into the lower aquifer. Although the fresh water was not being used for drinking or irrigation, its contamination was still determined to be a water-quality violation.

In 2006, Akzo entered a consent agreement with the state to operate a desalinization plant to protect the lower aquifer by treating the seeping brine.

The plant cost more than $8 million to build and at least $1 million a year to operate. The consent order was extended several times before the state Department of Environmental Conservation and the state Attorney General's office allowed it to expire last December.

A month earlier, state officials had hosted a public forum at SUNY Geneseo on the proposed closure of the desalinization plant. About 300 people attended, and several expressed irritation that the DEC's negotiations with the AG's office and Akzo had excluded local officials. The local officials followed up by urging DEC Deputy Commissioner and General Counsel Edward F. McTiernan to require Akzo to continue operating the plant.

"It appears clear that the pumping is meeting the goal of preventing the brine from entering the (lower) aquifer," Livingston County Board of Supervisors Chairman James Merrick wrote McTiernan. Merrick said county officials were "not interested in any settlement that would result in the discontinuance of the pumping operation."

In fact, McTiernan soon wrote Akzo attorneys that the consent agreement would not be extended, and the company stopped pumping in mid-December. The state did require the company to maintain the desalinization plant in a "stand-by basis" mode through Feb. 15, 2014.

"Based on available information," McTiernan wrote to Akzo lawyers, "(DEC) staff have concluded that brine squeezed from the mine is not expected to reach any current sources of drinking water including the intermediate or upper potable aquifers, or any surface water bodies. Rather, brine squeezed from the mine is expected to remain at the top of (the lower) aquifer."

The Retsof mine was approximately 1,100 feet below the surface, while the lower aquifer ranges from 700 feet to 200 feet below ground level and is roughly 25 feet deep.

Richard Yager, a hydrologist for the U.S. Geological Survey, said this week that water in the deepest parts of the lower aquifer — on the southern end near Sonyea and Mount Morris — are nearly pristine. The desalinization pumping had been preventing the brine from migrating to the purer water at the lower end

of the aquifer, he said. Now that it's stopped, the entire aquifer will be contaminated, he said last week.

In a USGS report he wrote last year, Yager acknowledged that water is abundant in upstate New York and that the lower aquifer has not been tapped.

"The future value of the aquifer could increase, however, if changes in climate were to lead to decreased recharge in the region or if population growth increased demand for potable water."

In the same report he noted that negotiations were underway to allow the lower aquifer to be sacrificed, for a price. "If such a settlement is reached, water in much of the lower aquifer will eventually become (undrinkable) and the groundwater resource will effectively be abandoned," he wrote. "So the agreement could be considered the first 'sale' of an aquifer."

Yager doesn't argue that the aquifer must be saved at all costs. It would be impractical, he notes, to operate the expensive plant into the indefinite future. The best solution, he suggested, would be to find a buyer for the pumped brine to offset operating costs. But no buyers have stepped forward.

While Livingston officials once insisted that the plant was necessary, they may be warming to the idea of sacrificing the aquifer now that they've been given a seat at the table. Under the proposed settlement, they stand to control $17 million of the $20 million Akzo payout.

Plus, local fears that Akzo would convert the desalinization plant into a treatment plant for fracking fluid from gas drilling in Pennsylvania's Marcellus Shale have been quelled by a proposed requirement that the plant be entirely dismantled within six months.

So apparently it's OK to sell an aquifer, or at least the right to pollute it. But what about the future?

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