AN ISSUE REVISITED: PRIVATE WELLS IN AREAS SERVICED BY PUBLIC WATER

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INTRODUCTION

If you have worked here long enough (24+ years for me), issues have a habit of resurfacing again and again. One such issue is the drilling of private wells in communities served by public water systems. Eight years ago I wrote an Aquafacts article regarding this issue. Recently, the private well issue has again come to my attention in another community. However, in this instance, it was not an individual wishing to drill a well but instead a company. In this case, the private well was actually drilled. The company in question uses water in its manufacturing process, but does not require potable water for this purpose. Presumably, it would be less expensive to drill a well, and then install a pump and related appurtenances instead of continuing to pay for treated public drinking water.

In the latest example, the community has no local regulations against the drilling of private wells in their service area. In addition, there were no regulatory hurdles on the part of state or other regulatory agencies that stopped or delayed the company from drilling and utilizing its own well. This is despite the fact that the company is located only 800 to 1,100 feet from well fields belonging to two different municipalities. The question posed to me was: won't regulatory agencies look at the potential impact upon municipal water supplies before permitting a new withdrawal? The answer to that question is not always and I'll attempt to explain it below. This is actually a situation where the system may wish to develop a source water protection plan and implement its own local regulations to address the issue of private wells within its service area. Many municipalities have adopted such provisions.

DEPARTMENT OF CONSERVATION (DEC) WATER WELL CONTRACTOR PROGRAM

The company in question in the example above engaged a DEC-registered and certified water well contractor. Under the DEC's Water Well Contractor Program, the well contractor must file a Preliminary Notice of Proposed Water Well with the DEC before drilling any well. The form for this preliminary notice of a proposed well requests basic information from the contractor such as the county, owner of the well, well location, tax map number, purpose of the well, etc. The primary objective of this preliminary notice is to obtain a DEC Well Number. This unique well identifier is then sent to the water well contractor and is used on the subsequent Well Completion Report that must be completed by the contractor and filed with the DEC and the well owner for each water well drilled. The important thing to remember here is that the Water Well Contractor Program (exclusive of Long Island) is not a permit program. There are no approvals granted by this program based upon analysis by DEC staff, etc. Note, however, that a local well permit is required in a few upstate counties by local sanitary codes. To learn more about the Water Well Contractor Program, visit https://www.dec.ny.gov/lands/4997.html

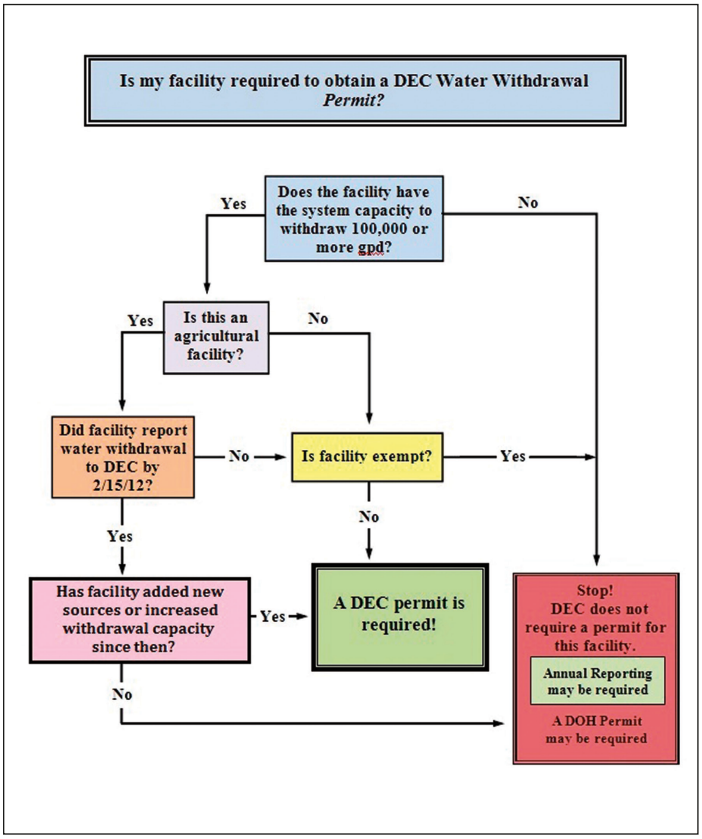

Figure 1. Decision Tree for DEC Water Withdrawal Permit

DEC WATER WITHDRAWAL PERMITS

As Figure 1 indicates, any non-exempt and/or non-agricultural facility with the capacity to withdraw at least 100,000 gallons per day (gpd) must obtain a DEC Water Withdrawal Permit. Note that capacity is determined by the DEC by summing the maximum potential withdrawal of all the water sources for a facility, not by the typical or actual withdrawal amount. Several items must be included in an application for a Water Withdrawal Permit. >>>

One of these is an Engineering Report. For groundwater sources, an evaluation of the well(s) to be used must be included based in part upon 72-hour pumping tests. In the example in question, the well that was drilled by the company did not have a potential withdrawal that approached the 100,000 gpd threshold and so the DEC Withdrawal Permit Program did not apply. More information on the DEC Water Withdrawal Permit Program can be accessed at: https://www.dec.ny.gov/lands/86935.html

DELAWARE RIVER BASIN COMMISSION (DRBC) AND SUSQUEHANNA RIVER BASIN COMMISSION (SRBC)

The DRBC and SRBC are interstate agencies with jurisdiction over most water withdrawals within their drainage basins, and withdrawal permits must be obtained from them rather than the DEC. Maps of the Delaware River Basin and the Susquehanna River Basin within New York State are included as Figures 2 and 3 respectively.

In the example in question, the community is located within the jurisdiction of the SRBC. The SRBC regulates water withdrawals of 100,000 gpd or more as calculated over a 30-day average. Unlike the DEC, the SRBC also regulates water withdrawals to certain consumptive uses. A consumptive use is defined as any loss of water through any process through which the water is not returned to the basin undiminished in quantity. It can be contended that the proposed use for the water by the company in question is a consumptive use. However, the SRBC only regulates consumptive uses of 20,000 gpd or more and that amount is unlikely to be reached by the use in question. The question the community had for me was, how do we know that the actual private well withdrawal amount is unless it is metered?

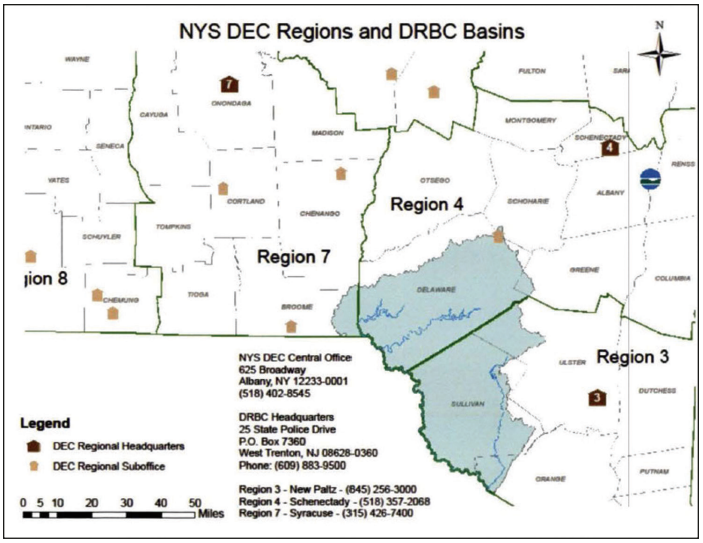

Figure 2. Delaware River Basin in New York State.

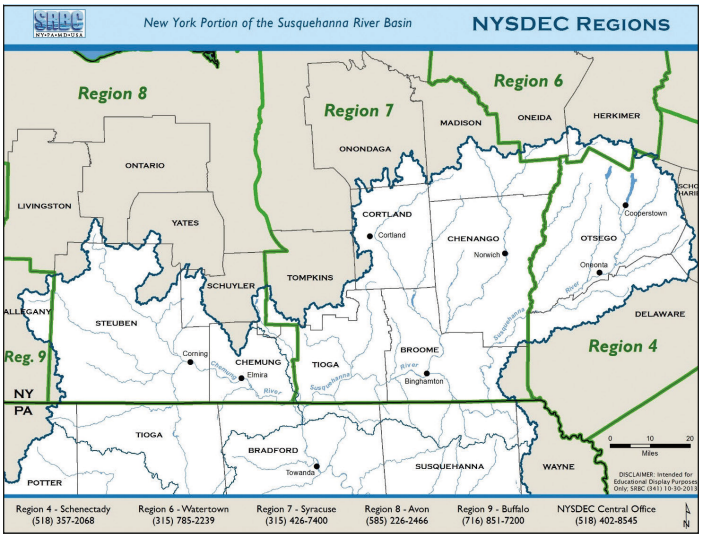

Figure 3. Susquehanna River Basin in New York State.

LOCAL REGULATION OF WATER WELLS WITHIN PUBLIC WATER SERVICE AREAS

In addition to obvious concerns over lost revenue, undermining the ability of the community to maintain its system, there are public health issues involved with the drilling and operation of wells in areas of existing public water. Well casings provide a preferential pathway for contamination to enter groundwater. Pumping of additional well(s) in an area can change existing groundwater flow paths, with the result being the potential migration of contaminants toward existing public wells. Wells can also interfere with each other, with the result being a loss of production. Having private wells within a service area could conceivably prevent the development of new public well supplies in the future. Finally, the issue of cross connection between a private water supply and the public water system is very important to mention. NYSDOH Part 5 regulations specifically state that *"the supplier of water may not allow a user to establish a separate source of water. However, if a user justifies the need for a separate source of water, the supplier of water shall protect the public water system from such separate source of water by ensuring that such source does not pose a hazard..."*

CLOSING THOUGHTS

For public health reasons alone, a municipality with a public water supply system should strongly consider updating their water regulations to prohibit private wells or only permit them under certain circumstances. I have several examples of what other communities have done, and I would be glad to help you write such language if you are interested. I would recommend doing this as part of an overall source water protection plan. As always, you can give me a call at 1-888-NYRURAL, ext. 170 or email me, winkley@nyruralwater.org.