

The Role of Local Government in the Proper Closure of Abandoned Wells

There are approximately 1 million abandoned wells in Michigan. Abandoned wells pose a serious threat to drinking water quality. Unsealed abandoned wells allow runoff water contaminated with bacteria, sediment, fertilizer, pesticides, and other chemicals to flow directly into the groundwater. Abandoned wells also allow contaminated or poor quality water to flow from one aquifer to another. Finally, large-diameter abandoned wells are a physical hazard since adults, children, or animals may fall into them.

What is An Abandoned Well?

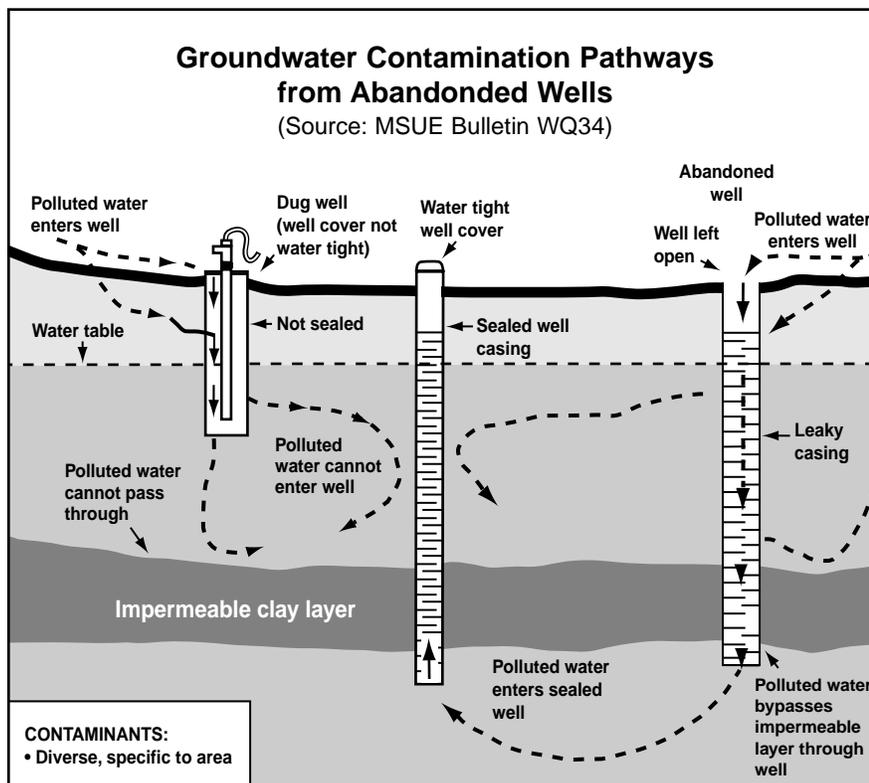
An abandoned water well fits one or more of the following categories:

1. It is no longer in use;
2. It is in such disrepair that it can no longer be used to obtain groundwater;
3. It poses a threat to groundwater; or
4. It is contaminated and poses a health hazard.

Abandoned wells usually refer to small-diameter drilled wells formerly used for drinking water or water for lawns. Other types of abandoned wells include hand-dug wells and cisterns for storing rainwater.

Rule 168 of the Public Health Code gives the local health department and the Michigan Department of Environmental Quality authority to order a well owner to plug an abandoned well. The weak link in Michigan's regulation of abandoned wells is that only after the property owner or the county health department has identified a well as "abandoned" can the well owner be forced by law to have it properly closed.

With so many abandoned wells in Michigan, there is an obvious need to implement well closure programs. Yet, cost-share funding and technical assistance are currently only available in agricultural areas. No financial support is available for well closures in villages, townships and cities.



Who Has Regulatory Authority Over the Closure of Abandoned Wells?

The Michigan Department of Environmental Quality, Division of Drinking Water and Radiological Protection (DWRP) and local health departments are charged with implementing the provisions of Part 127 of the administrative rules of the Michigan Public Health Codes which includes regulations for well abandonment.

Staff of local health departments are responsible for actually implementing Michigan's abandoned well provisions. They inspect wells to determine if they comply with any of the criteria for an abandoned well and carry out inspections after



well closure to insure that wells are properly plugged. Michigan law requires a report on the method of sealing (e.g., well log) to be filed with the county health officer

The state well construction code (*Groundwater Quality Control Rules* of 1994) states that an abandoned well must be filled in such a way that it no longer poses a threat to groundwater supplies, drinking water supplies or public health. Well owners are potentially liable if groundwater contamination is traced back to their abandoned well(s) under Michigan's *Polluter Pay Law* (1982 PA-307 as amended by 1990 PA-234).

Well owners cannot be forced to close their wells even when those wells cease being their primary source for drinking water nor report their out-of-service wells to the local health department. Most often, wells become abandoned when properties are hooked up to a municipal water system or when homes or buildings are upgraded or demolished, making the existing drinking water well(s) obsolete. While property owners may continue for a while to use their wells as a source of garden or lawn irrigation, there are no laws granting the local health department or the DWRP authority to oversee the proper maintenance of those wells. In this way, many wells become abandoned and forgotten.

What Can Local Government Do To Ensure Proper Well Closure?

The lack of records on old private wells is the biggest obstacle to locating and properly closing out-of-use wells. Since 1967, well drillers have been required to submit a well log; however, well location is often poorly or incompletely described making it difficult to find the wells.

While no regulatory options are available to local government, officials and staff do have a role to play in ensuring the proper closure of abandoned wells. First, they can take a leadership role in identifying and mapping abandoned well locations in their area. Officials can use the newspaper, town hall meetings, mailings and other channels to communicate to the public the importance of finding and plugging abandoned wells and to enlist their help in finding those wells. This information could then be relayed to the local health department who would oversee the proper closure of the wells.

Local government officials and staff can also be proactive. There are two administrative points where local government can intercede to address well water closures: when property owners connect to a municipal water supply system; and when property owners apply for demolition permits.

In the case of municipal hookups, local government officials and staff could ask property owners if they have any out-of-service wells as a result of the hookup. The municipality could then notify the county health department so that sanitarians could follow up with well closure information and regulations. If property owners have not abandoned their wells, then they can be targeted for yearly or more frequent mailings reminding them of their responsibility for proper closure of abandoned wells as well as their liability should any groundwater contamination be traced to their wells.

In the case of demolition permits, a letter from the local health department verifying the proper closure of all wells on the property could be required before a demolition permit is granted. Such an approach, however, requires cooperation between local and county government.

A Local-County Partnership: The Auburn Hills—Oakland County Well Closure Program

The Auburn Hills-Oakland County partnership is rare in Michigan and illustrates how local and county government can work together in addressing the problem of abandoned wells. The abandoned water well program requires demolition permit applicants to verify that all abandoned wells on their property have been properly plugged. It intervenes at an effective point in the site plan approval and building review process, and is proactive. The process consists of four steps.

1. When applying for a demolition permit from the Auburn Hills Building Department, applicant(s) are asked if there are wells on-site. If they say yes, then they are told that they must contact the Oakland County Health Division to obtain a letter verifying proper well closure.
2. At the request of the applicant(s), a sanitarian with the Environmental Health Division completes an on-site inspection to verify the location and condition of the well(s). The sanitarian informs the property owner(s) of the legal requirements for abandoned well closure and encourages them to contact a licensed well driller. While closure may be completed by the property owner, it is discouraged.
3. The sanitarian completes a second on-site inspection or reviews the situation with the licensed well driller after well closure. If the well has been properly plugged, then the Health Division provides the owner with a letter verifying proper well closure.
4. The applicant(s) send the letter to the Auburn Hills Building Department to complete the demolition permit application process.

The Auburn Hills-Oakland County abandoned well program has also been timely since Auburn Hills is a hot spot for new construction and the temptation exists to leave wells open. The program also targets the proper closure of out-of-use septic tanks. If applicants say that there are septic tanks on-site, then staff from the Environmental Health Division inspect the tanks to ensure that they have been properly drained and disposed of.

Other Information Sources

1. "Abandoned Wells and Cisterns," (Groundwater Protection Fact Sheet) Michigan Department of Environmental Quality. For copies, contact MDEQ's Environmental Assistance Center, tel: (800) 373-9400.
2. For information about state regulations and well abandonment procedures, contact Mike Gaber, Well Construction Unit, Michigan Department of Environmental Quality, tel: (517) 335-8304.
3. "Plugging Abandoned Wells," (WQ 40) available at the MSU Extension Bulletin Office at 108 Agriculture Hall, MSU, tel: (517) 355-0240. Cost is \$ 0.30 per copy.
4. "Well Decommissioning for Groundwater Protection," (booklet) available from the Environmental Stewardship Division, Michigan Department of Agriculture. For copies, contact Jack Knorek, tel: (517)241-0236. Copies are free.
5. For information on the Auburn Hills-Oakland County well closure program, please contact Gary Frick at (248) 858-1323 of the Oakland County Environmental Health Department.

6. "Where are the Abandoned Wells?" (article in Municipal Forum for Groundwater Protection, Bulletin #3), available from the Clinton River Watershed Council, 1970 E. Auburn Road, Rochester, 48307, tel: (248) 853-9580.

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