



# NEW YORK STATE DEPARTMENT OF HEALTH

*Bureau of Water Supply Protection*

*Flanigan Square, 547 River Street, Troy, New York 12180-2216*

## INDIVIDUAL WATER SUPPLY WELLS - FACT SHEET #4 DECOMMISSIONING ABANDONED WELLS

Drinking water wells and other types of wells that are no longer in use can pose safety hazards, especially to small children and pets. These abandoned wells can also serve as pathways for contamination to enter groundwater. Abandoned wells should be properly decommissioned to eliminate these potential hazards. The Department recommends wells be decommissioned using the methods described below.

### Well Decommissioning Methods

Prior to abandonment of any well the pump, drop pipe, electrical controls, etc. must be removed from the casing. Leaving these items inside the well casing will cause voids when filling the well, which may increase the possibility of contamination of the well and local aquifers.

- **Driven Points** made of small diameter pipe should be pulled out of the ground. The hole should be filled with grout if possible. The area should be graded so that surface water flows away from the abandoned well location.
- **Dug wells** should be back filled with soil similar to surrounding soils, and compacted to match the surrounding soils. Broken concrete, wood, or other debris should NOT be used as backfill. Prior to back filling, the side wall lining of the dug well should be removed to the full depth if safety can be maintained or to at least four feet below ground level. Dug wells that have penetrated fractured rock should have a cement or grout seal placed in the rock section prior to back filling. After back filling, the area should be graded so that surface water flows away from the abandoned well location.
- **Drilled wells** can be difficult to decommission properly. Whenever practical, the well casing should be pulled out of the ground or overdrilled, and the length of the drill hole sealed with grout. When full casing removal is impractical, the entire length of the drillhole including casing interior should be grouted, and the casing cut off at least four feet below ground. Well casings that penetrate multiple aquifers should be perforated prior to pressure grouting the interior. After back filling, the area should be graded so that surface water flows away from the abandoned well location.
- **Artesian wells, wells in creviced rock such as limestone, and wells penetrating multiple aquifers** pose the most difficult decommissioning procedures. The Department recommends that well drillers follow the procedures found in American Water Works Association Standard A100 "AWWA Standard for Water Wells".

## **Using Grouts**

The proper use of grout in decommissioning a well can provide the best protection against contaminant migration. Effective grouting requires careful placement to ensure no voids are left in the well and that the seal is complete. Registered well drillers can ensure proper grout selection and installation.

Grout is a material that has a low permeability, such as neat cement, bentonite slurry, bentonite chips, bentonite pellets, granular bentonite, or other materials that have equivalent sealing properties. Numerous grout products are available, and a proper match of grout to method is essential.

## **Regulatory Requirements**

In some locations, one or more regulatory agencies and/or municipalities may have specific requirements for decommissioning abandoned water wells. The Local Health Department should be consulted for information on regulatory requirements prior to decommissioning.

State regulations require that anyone engaged in the business of water well drilling in the state of New York first obtain a certificate of registration from the Department of Environmental Conservation (DEC). Water well drilling activities covered by this regulation include well decommissioning.

## **Registered Well Drillers**

The decommissioning of abandoned individual water supply wells can be difficult and dangerous. Though decommissioning may be done by the homeowner, it is strongly recommended that the services of a DEC registered well driller be obtained.

A list of DEC registered well drillers can be found at:

**<http://www.dec.ny.gov/cfm/EXTAPPS/WaterWell/index.cfm>**

Appendix 5-B can be found at:

**<http://www.health.state.ny.us/environmental/water/drinking/part5/appendix5b.htm>**

**For questions concerning this Fact Sheet or a copy of Appendix 5-B:**

Contact your Local Health Department

or

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