

Water Witching

08/06/2009

Position Paper

Subjects

Water witching, dowsing, groundwater use, groundwater, resource assessment

Audience

Homeowners, government officials, building contractors

Background

“Water witching” refers in general to the practice of using a forked stick, rod, pendulum, or similar device to locate groundwater.

Confusion exists as to the first historical reference to the divining rod as an instrument to locate water. Either 1568 or 1630 are cited as the first references. In any event, from about that time on, the divining rod was used in southern Europe in search of water.

In the 1861 Ohio Supreme Court ruling in *Frazier v. Brown*, groundwater was judged as being too secret and occult to be adjudicated by law. This ruling was overturned by the Ohio Supreme Court and in the December 31, 1984, concurring opinion. Justice Holmes wrote “. . . a primary goal of water law should be that the legal system conforms to hydrologic fact. Scientific knowledge in the field of hydrology has advanced in the past decade to the point that water tables and sources are more readily discoverable. This knowledge can establish the cause and effect relationship of the tapping of underground water to the existing water level. Thus, liability can now be fairly adjudicated with these advances which were sorely lacking when this court decided *Frazier* more than a century ago.”

The Winter 1983-84 issue of *The Skeptical Inquirer* reported on a controlled dowsing experiment done by a Boston University student. The article stated in summary “. . . When dowsers perform under controlled conditions, they do not do better than one would expect by chance.”

Issue

What is the best method for locating groundwater?

Position

The National Ground Water Association strongly opposes the use of water witches to locate groundwater on the grounds that controlled experimental evidence clearly indicates that the technique is totally without scientific merit. The Association recommends the use of proven hydrogeological and geophysical techniques for groundwater reconnaissance when its presence is not easily recognizable by drilling contractors.

As a first step in locating groundwater, a hydrogeologist prepares a geologic map showing where the different kinds of rock come to the land surface. Next, the individual gathers information on other wells in the area—their locations, the depth to water, the amount of water pumped,

and the kinds of rock they penetrate. The hydrogeologist considers the surficial geology, topography, hydrology, and vegetation. In certain cases, the hydrogeologist may employ fracture trace analysis or geophysical surveys.

If there are no wells in the area or not enough information is available, the hydrogeologist may contract with a water well contractor to put down test holes. Pumping or aquifer tests will be performed to indicate the water-bearing properties of the aquifer tapped by the test holes. These tests can be used to determine the amount of water moving through the aquifer, the volume of water that can enter the well, and the effect of pumping on the water level of other wells in the area.

A qualified drilling contractor should be employed when a water well is needed. In most cases, the water well contractor has many years of experience in the area in which the firm operates. The contractor has made a large investment in sophisticated equipment. In some instances, the contractor may be a geologist or hydrologist, or retain such a scientist on staff. If not, the water well contractor has other technical sources of information at his/her disposal, such as well logs. Well logs are records of the other wells drilled in the area.

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References

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U.S. Geological Survey. The Divining Rod, A History of Water Witching, Water-Supply Paper 416, 1917.

Dates

Originally adopted by the NGWA Board of Directors on October 28, 1989, NGWA issue briefs are updated as needed to reflect changes in information, as noted here: technical amendment made February 4, 1992; document reformatted August 2009.

The National Ground Water Association is a not-for-profit professional society and trade association for the groundwater industry. Our 14,000 members from all 50 states include some of the country's leading public and private sector groundwater scientists, engineers, water well contractors, manufacturers, and suppliers of groundwater-related products and services. The Association's vision is to be the leading groundwater association that advocates the responsible development, management, and use of water.