

## BACKGROUND

Traces of pesticides used decades ago have been found in many private water supply wells in Montgomery and Richmond County. The same pesticides have been found in groundwater in other states and other countries. In every case, the chemicals were applied repeatedly and heavily to crops growing on deep sandy soil. Other wells on land previously used for crops in the Sandhills and in other parts of the state may be also contaminated.

## WHAT PESTICIDES WERE FOUND?

Dibromo chloro propane (DBCP), dichloro propane (DCP) and trichloro propane (TCP) were found.

These pesticides are volatile organic compounds (VOC's). They were sold under trade names including Dowfume, Fumazone, Vidden D, Telone and Nemagon. They have been banned since the 1980's and are no longer in use.

## WHAT ARE THE HEALTH EFFECTS OF THE PESTICIDES?

Exposure to these pesticides has been associated with a potential increased risk of

cancer and other adverse health effects. Consult your health department for an evaluation of potential risk.

## WHY WERE THESE CHEMICALS USED ON NC FARMLAND?

They were used as soil fumigants from the 1950's to the 1980's to kill soil nematodes (microscopic worms that eat roots and decrease yields). They were applied repeatedly to peaches, tobacco, grapes, soybeans, and other row crops grown on very deep sandy soil.

## HOW DO THE PESTICIDES GET INTO A WELL?

Even when the directions on the label were followed, the pesticides moved down through the deep sandy soil to the bottom of the most commonly used drinking water aquifer. Over time, the pesticide contaminated water has moved downhill and will eventually discharge to creeks or rivers. Most wells in the area draw water from the bottom of this aquifer where the pesticides are most likely to be found.

## WHO SHOULD CONSIDER HAVING THEIR WELL TESTED?

Residents with wells that draw water from the shallowest aquifer (usually less than 120 feet deep) on or near former farm land (especially peach orchards) on deep sandy soils (especially in the Sandhills) should consider well water testing.

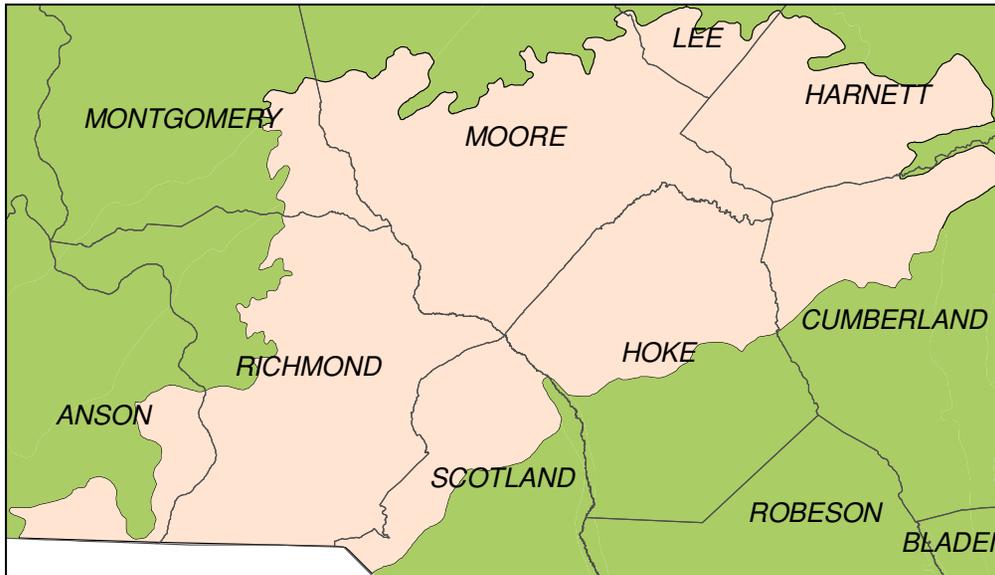
## HOW DO I HAVE MY WELL TESTED?

The chemicals found are not typical pesticides. TO TEST YOUR WATER FOR THESE CHEMICALS, HAVE A PRIVATE LAB OR THE LOCAL COUNTY HEALTH DEPARTMENT TEST YOUR WATER FOR VOLATILE ORGANIC COMPOUNDS. A WATER SAMPLE ANALYZED FOR "PESTICIDES" WILL NOT DETECT THEM.

## WHAT ARE MY OPTIONS IF MY WELL IS CONTAMINATED?

The local health department or the regional office of DWQ will assist you. (Phone numbers are on the back of this pamphlet). Long term solutions include installing a filtering system, drilling a new well into a deeper aquifer, or having county water piped to your house.

# Pesticides in Wells in the Sandhills of North Carolina



The Sandhills region of the state is shown in tan. It covers parts of Cumberland, Harnett, Hoke, Lee, Montgomery, Moore and Scotland Counties.

## WEB LINKS

County Health Departments: <http://www.ncalhd.org/county.htm>  
Certified laboratories: <http://portal.ncdenr.org/web/wq/lab/cert/certlablists>  
Groundwater studies by DWQ: <http://portal.ncdenr.org/web/wq/aps/gwp/groundwater-study-publications>

## REFERENCES

Milosh, R and A Keyworth, 2011. Occurrence of Soil Fumigants in Groundwater of the Sandhills. Montgomery County North Carolina. 18 p.



## CONTACT INFORMATION

Please call your regional Aquifer Protection Section for general groundwater information.  
Fayetteville Regional Office (910) 433-3300      Mooresville Regional Office (704) 663-1699  
Raleigh Regional Office (919) 791-4200      Washington Regional Office (252) 946-6481  
Wilmington Regional Office (910) 796-7215      Winston Salem Regional Office (336)771-5000  
Asheville Regional Office (828) 296-4500



North Carolina Department of Environment and Natural Resources



Division of Water Quality



Aquifer Protection Section