

## Well and Water testing frequently asked questions

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### Wells

#### **Do I need a permit to drill a new well or to repair or abandon an existing well?**

Yes, before beginning construction, repair or abandonment of a well a permit is required from Wake County Environmental Services. Permit applications are available online or can be mailed or faxed. There is a permit fee for new well construction; however there is no fee for a well repair or abandonment permit.

#### **What if any inspections are required for my well?**

When a new well is constructed, site visits are made to complete the following inspections:

- Siting the well location and issuance of a well construction authorization permit
- Inspecting the casing grout and well location during the well construction
- Inspecting the well head after the pump is installed
- Collecting water samples and obtaining approved results before a Certificate of Occupancy is issued.

When an existing well is used for new construction, the well head must be inspected and the water quality must be determined before a Certificate of Occupancy is issued.

### **Are these inspections required before I can get my Certificate of Occupancy (CO)?**

Yes, for newly constructed wells all inspections must be completed and all required sampling must be completed with satisfactory results before a CO is issued.

### **What determines whether I can keep an existing well or have to abandon it?**

If a well is determined to be a source or channel of contamination, or is located too close to a source of contamination, such as a septic system, the well must be properly abandoned (filled in).

### **What do I need to do to maintain and protect my well?**

Make sure that the well is protected from freezing. Also, do not use or store pesticides, gasoline and other contaminants near your well. More information can be found here (<http://www.wellowner.org>)

## **Water Testing**

### **Where and how can I have my well water tested?**

Testing options include private labs or Wake County's laboratory. Please see <http://www.wakegov.com/water/wells/watersampling.htm> for more information regarding water testing through Wake County Environmental Services and Human Services Laboratory.

### **Can I get my water tested for free and if not why?**

Wake County's operating budget does not provide for free water testing. The costs associated with sample analysis, such as labor, equipment and supplies must be reimbursed through fees.

### **What tests must be collected by Environmental Services?**

Tests such as volatile organics (petroleum products, solvents), pesticides, herbicides, and radionuclides must be collected, transported and submitted by an Environmental Health Specialist using standard methods mandated by EPA.

### **What should I have my water tested for?**

Any sample analysis should be based on problems you are encountering or your concerns. Please contact one of our Environmental Health Specialists for guidance at 919-856-7400.

### **How often should I have my well tested?**

We recommend that you have your well water tested whenever you notice a sudden change in the taste, smell or appearance of your water. It is always wise to test a well before occupying an existing home. It is a common recommendation to sample a well annually for coliform bacteria.

### **What do I do if coliform bacteria are found in my well water?**

It is recommended that the well be disinfected through a chlorination process (<http://www.wakegov.com/water/wells/chlorinationdisinfectionguidelines.htm>) and then retest upon having all of the chlorine flushed from the well and water system. It is recommended to not use the water for drinking or cooking until acceptable sample results are achieved.

### **How do I go about having my well chlorinated?**

Please <http://www.wakegov.com/water/wells/chlorinationdisinfectionguidelines.htm> to refer to our chlorination/disinfection instructions

### **What do I do if bacteria are found on a follow up sample after the well has been chlorinated?**

If a retest determines that coliform bacteria are present, then the recommendation is to attempt the chlorination process again and retest. If, after three chlorination procedures the well continues to test positive, then other options are to inspect the well with a camera to determine if the well has construction deficiencies (<http://www.wakegov.com/water/wells/videoinspections.htm>). Another option is to install online treatment devices such as ultraviolet lights to disinfect the water.

### **My well water has a bad smell like sulfur, what tests should be run and what can be done to fix this?**

These smells are typically caused by sulfur bacteria or sulfate-reducing bacteria. While not harmful, these bacteria can be quite a nuisance. There are tests to determine if this type of

bacteria is present. A standard recommendation to remove these bacteria is to thoroughly treat the well and the entire water system with chlorine.

### **How do I test for red muddy water or reddish staining?**

In most cases red material tests as iron, not mud. Iron can cause staining of fixtures. If the water is reddish we recommend an iron/sediment test. In many cases, the reddish color is due to a condition referred to as biofouling, where bacteria in the well feed off of nutrients in the well and over time produce the reddish water. This is usually addressed by cleaning the well, lining the well casing and placing the well pump at an optimum location in the well. Other culprits of red water are iron bacteria. There is a standard test to determine the presence of iron bacteria.

### **What may cause green or bluish-green stains on fixtures?**

The pH of well water in Wake County is generally less than 6.5 and therefore acidic. Acidic water reacts with copper pipes and copper in fixtures resulting in the blue-green stains. A common remedy is to install an acid neutralizer water treatment system. Another option is to replace copper pipes with plastic pipes.

### **What if I am concerned about pesticides, petroleum or radon?**

Wake County can assist you in testing for pesticides, herbicides, petroleum products and radionuclides. Please contact one of our Environmental Health Specialists for more information.

### **What types of payments are accepted by the Wake County Laboratory?**

Payment for water analysis can be made by check or exact change. Credit cards are not currently accepted, unless processed through the Department of Environmental Services.

