

Private Well Outreach Project

The Private Well Outreach Project has conducted private well outreach in three South Jersey communities. These communities were identified as having private wells at high risk of radium contamination. The results from 323 tested wells are presented here.

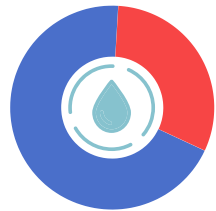
80%

of raw/untreated water samples had radioactivity > 5 pCi/L*



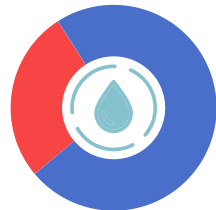
69%

of homes reported having water treatment



27%

of water treatment systems did not reduce radioactivity to safe levels, likely due to poor maintenance



41%

of families were exposed to radioactivity > 5 pCi/L* because they didn't have water treatment or their water treatment was failing



*A gross alpha radioactivity result > 5 picocuries per liter (pCi/L) indicates unsafe levels of radium in drinking water wells located in South Jersey.

Additional Private Well Resources

New Jersey Private Well Testing Act:
nj.gov/dep/dsr/pwta/

Potable Water Loan Program:
nj.gov/dca/hmfa/consumers/homeowners/

South Jersey Homeowner's Guide:
nj.gov/dep/rpp/rms/agreedown/radwater.pdf

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Environmental and Occupational Health Surveillance Program

Private Well Outreach Project:
nj.gov/health/ceohs/environmental-occupational/private-well-outreach/

Phone: (609) 826-4984

Radioactivity in South Jersey Private Well Drinking Water



What is gross alpha radioactivity in water?

Gross alpha is a measure of radioactivity in drinking water. In South Jersey, radium is the element that causes this radioactivity. Radium is a naturally occurring contaminant. The Kirkwood-Cohansey Aquifer, which provides drinking water to many counties in South Jersey for both public and private well water sources, contains elevated concentrations of radium.

Radium is odorless, colorless and tasteless. Testing is the only way to determine if it is present. A gross alpha test > 5 pCi/L indicates high radium in South Jersey drinking water.

Adverse Health Effects

Chronic exposure to unsafe levels of radium can cause:

- **Anemia**
- **Bone, breast, liver and sinus cancer**
- **Cataracts**
- **Fractured teeth**



Testing your water

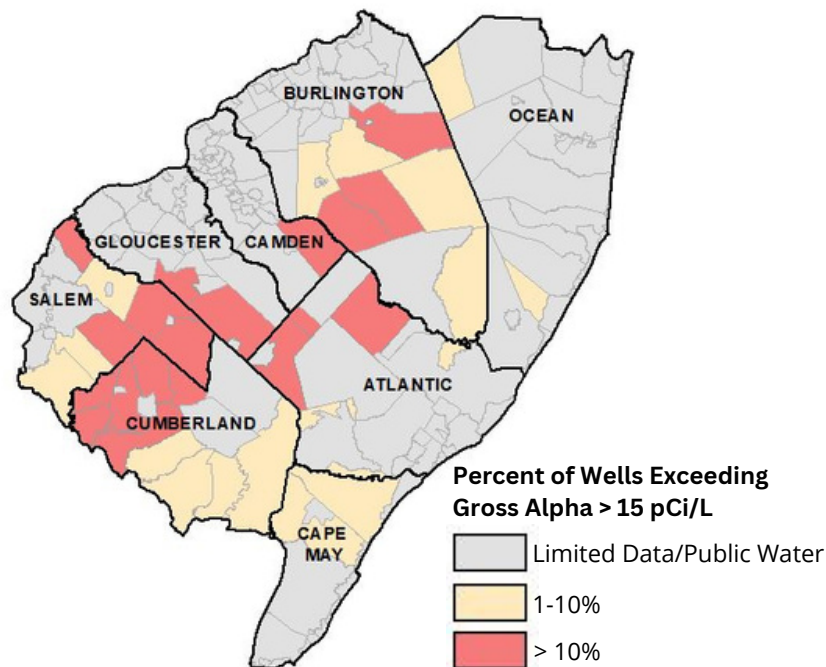
Well owners should have their well water sampled and tested for gross alpha by a NJ certified laboratory. A list of certified labs is available here:

<https://bit.ly/PWTALabs>



Private Well Communities Vulnerable to Radium in Drinking Water

Many wells in South Jersey are vulnerable to radium. Data available from the New Jersey Private Well Testing Act (PWTa) identifies municipalities with a high percentage of private wells with exceedances for gross alpha radioactivity**.



Municipalities with a percentage > 10% (red) include:

Atlantic County: Buena Vista, Folsom Borough, Mullica

Burlington County: Pemberton, Shamong, Tabernacle

Camden County: Waterford

Cumberland County: Deerfield, Fairfield, Greenwich, Hopewell, Stow Creek, Upper Deerfield

Gloucester County: Elk, Franklin

Salem County: Alloway, Oldmans, Pittsgrove, Upper Pittsgrove

** Available data from the PWTa defines an exceedance as a gross alpha result > 15 pCi/L. A larger number of wells are at risk of exceeding > 5 pCi/L and are not shown on this map.

Reducing Radioactivity in your Drinking Water

Water Treatment:

A water softener or reverse osmosis can reduce radioactivity in your drinking water. A water softener is a filter that exchanges sodium for hard water minerals including magnesium and calcium and other positively charged ions (cations) such as radium. A **water softener is a cost-effective (\$800 - \$1,500) option for the average home. You may consider installing a water softener as a protective measure.**

A point-of-use (POU) reverse osmosis system is another effective treatment option, however it only treats one tap in the home (usually the kitchen sink) and exposure may continue from other taps. Whole house versions are available but are expensive.

Maintenance is necessary:

For water softeners, monitor salt levels in the brine tank and for reverse osmosis, change filters in accordance with manufacturer's instructions. It may be beneficial to consult with a water treatment professional to determine the most suitable water treatment for your home

Financial Assistance:

The NJ Housing & Mortgage Finance Agency offers a Potable Water Loan Program that can be utilized by individual homeowners to assist with water treatment financing. More information on the Potable Water Loan Program is available here:

nj.gov/dca/hmfa/consumers/homeowners/