

New Jersey Department of Health Private Well Outreach Project

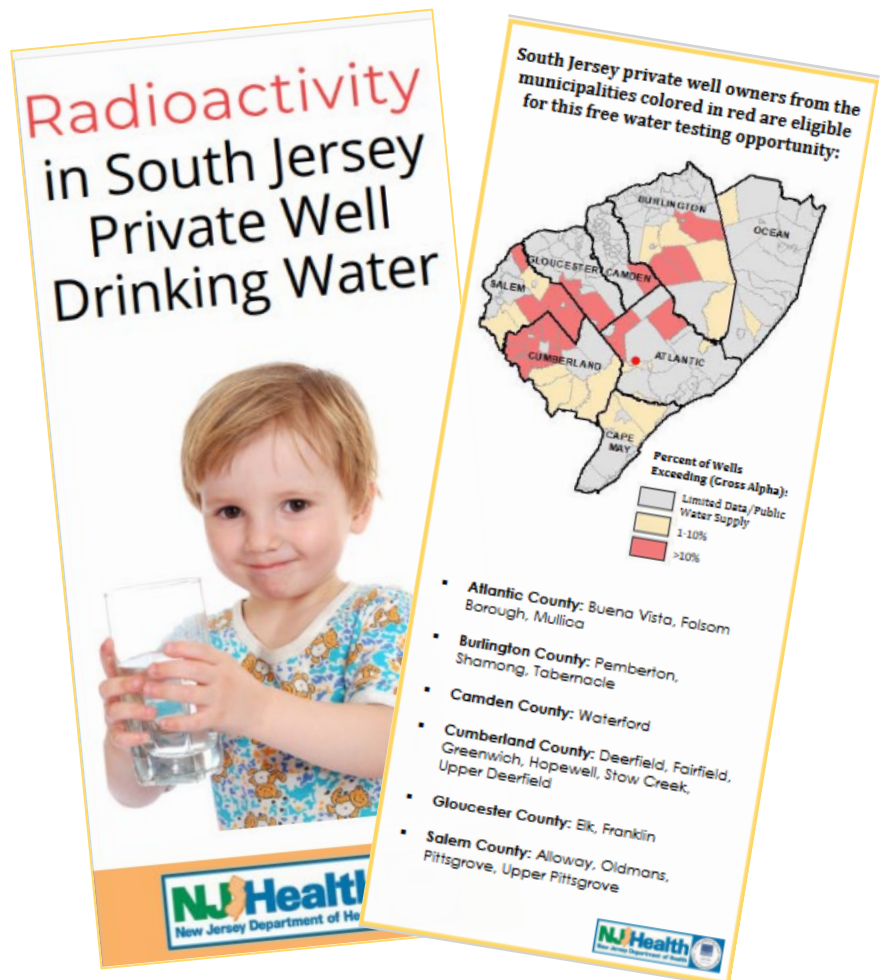
Project Summary: Private Well Outreach and Education for Radioactivity in South Jersey

The New Jersey Department of Health Private Well Outreach Project developed educational materials and offered free water testing to raise awareness of radioactivity in private well drinking water in South Jersey communities.

Background: Private well owners are solely responsible for the quality of their drinking water. In many South Jersey communities, private well users are likely to have drinking water with gross alpha radioactivity greater than 5 pCi/L, which indicates that radium levels are in exceedance of primary drinking water standards. Water softeners and reverse osmosis systems are effective treatment methods for reducing radium in South Jersey well water.

Description of Partners and Outreach Activities:

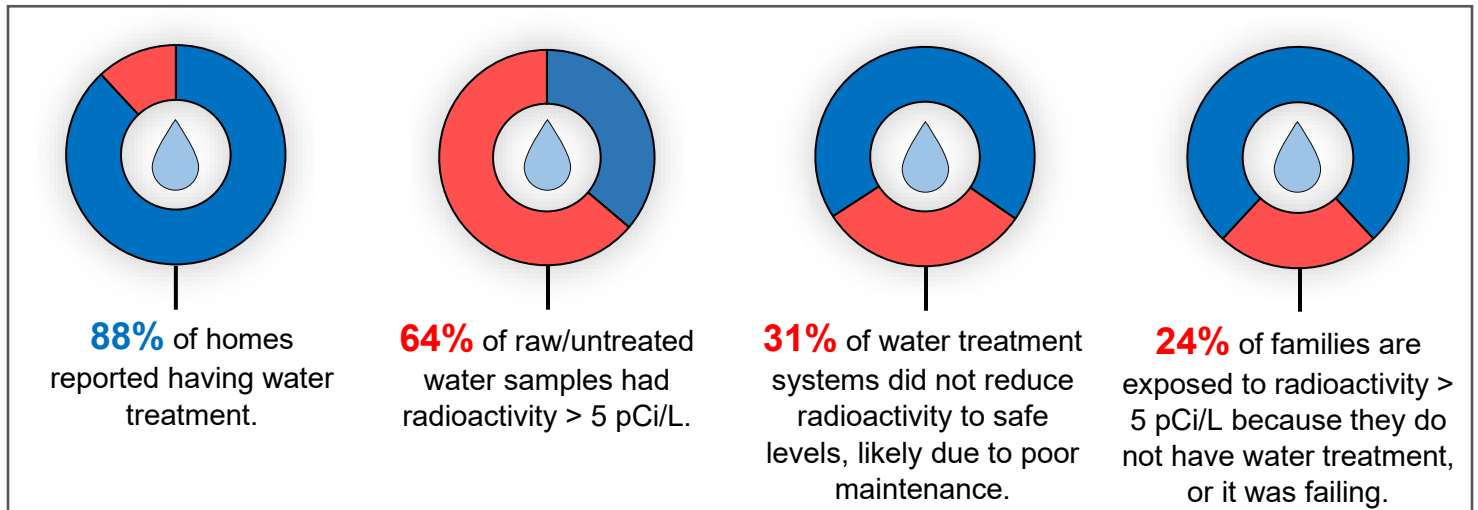
To promote awareness of radioactivity in South Jersey private well water, we distributed educational pamphlets along with a free water testing offer to townships and local health departments from eligible municipalities. A total of 19 eligible municipalities were identified as having a high percentage (>10%) of private wells with Private Well Testing Act (PWTA) data exceeding the gross alpha radioactivity drinking water standard for of 15 pCi/L. Several townships posted the opportunity on their websites and social media. The recruitment yielded over 260 online registrants from homes located in 12 eligible municipalities. The project team contacted 171 registrants to schedule sample collection. Several homeowners did not return our call, were no longer interested, or were not available to schedule. Other registrants will remain on a waitlist if future outreach opportunities become available.



The **New Jersey Department of Health's Public Health and Environmental Laboratories (PHEL)** Radiologic Laboratory analyzed raw and treated water samples for 48-hour gross alpha radioactivity. To ensure timely delivery to the state laboratory, water sample collection was conducted in partnership with the **New Jersey Department of Health Private Well Outreach Project** team and

eight staff from the **New Jersey Department of Environmental Protection's Bureau of Environmental Radiation** and **Division of Science and Research**. Over the course of nine weeks from June 12, 2023 – August 9, 2023, staff sampled water from 109 private well homes. All homeowners were sent their water test results via mail and email, along with recommendations and links to additional resources.

Outreach Findings:



Among the 109 homes on private well water, **96 (88%) had water treatment**. A total of 105 raw (untreated) water samples were collected along with 96 treated water samples. Among the 105 raw water samples, 38 (36%) were below 5 pCi/L and no further action was recommended. Alternatively, **67 (64%) homes had raw water results > 5 pCi/L**, indicating elevated levels of radium in raw water and of these homes, 64 (91%) had water treatment. **Of the 64 treated water samples, 20 (31%) were > 5 pCi/L**, suggesting that they do not have the correct water treatment, or their current water treatment is not being maintained sufficiently.

In total, among the 109 homes sampled, we found 26 (24%) homes are being exposed to gross alpha radioactivity > 5 pCi/L at their tap. These 26 homes include 20 homes which had water treatment that was not reducing levels of gross alpha radioactivity below 5 pCi/L and six homes that did not have treatment, although they have raw water > 5 pCi/L. Findings for each township are included in Table 1 on the next page.

Next Steps: Continue to promote awareness to private well families in your communities about private well water treatment and maintenance. This may include distribution of our educational pamphlet. The pamphlet identifies communities that are most impacted by gross alpha radioactivity in South Jersey and provides resources and tips for homeowners on testing, treatment, and maintenance for gross alpha radioactivity.

Table 1. Findings from South Jersey private well outreach for gross alpha radioactivity by municipality.

County, Township	# of homes Tested (total)	# of homes with raw water >5 pCi/L	# of homes with treatment	# of homes with treated water >5 pCi/L	# of homes exposed to drinking water >5 pCi/L**
Burlington County					
Shamong Twp.	5	5	5	2	2
Camden County					
Waterford Twp.	31	26*	28	9	11
Cumberland County					
Deerfield Twp.	2	0	0	0	0
Fairfield Twp.	3	2	3	1	1
Greenwich Twp.	6	2*	5	0	1
Hopewell Twp.	10	5*	10	2	2
Stow Creek Twp.	1	1	0	0	1
Upper Deerfield Twp.	4	4	3	0	1
Gloucester County					
Franklin Twp.	25	12*	22	1	1
Salem County					
Alloway Twp.	2	1	1	0	1
Pittsgrove Twp.	16	9*	16	4	4
Upper Pittsgrove Twp.	4	0	3	1	1
OVERALL					
All townships	109	67	96	20	26

Footnotes:

*A raw water sample was not available.

**A home is considered exposed if they have failing raw water, but they do not have water treatment, or their water treatment is failing.