

Farms of New Kent Water System – 2016 Water Quality Report

The Farms of New Kent Water System serves the Farms of New Kent development, near Talleyville, including: Four Seasons, The Arbors, Viniterra, New Kent Winery, Viniterra Golf Course, as well as Watkins Elementary School and select businesses at the Rt. 106/I-64 interchange.

In the spring of 2015, the neighborhoods of Kenwood Farms, Greenwood Estates, Deerlake and Quinton Estates were connected to this water system.

SOURCES AND TREATMENT OF DRINKING WATER

The source of the drinking water is groundwater. Well #1 is located at the I-64/Route 106 intersection, and Well #2 is located off Route 618. Water from the well is disinfected with sodium hypochlorite solution.

The Virginia Department of Health has not yet conducted a source water assessment of the Farms of New Kent wells.

WATER QUALITY RESULTS

I. Microbiological Contaminants

| Contaminant | MCLG | MCL | Number of Samples Indicating Presence of Bacteria | Violation (Y/N) | Month of Sampling | Typical Source of Contamination |
|-------------------------|------|--|---|-----------------|-------------------|--------------------------------------|
| Total Coliform Bacteria | 0 | Presence of bacteria in more than one sample per month | 0 | No | Jan-Dec | Naturally present in the environment |

II. Lead and Copper Contaminants

| Contaminant | Units of Measurement | Action Level | MCLG | Results of Samples for the 90 th Percentile Value | Action Level Exceedance (Y/N) | Month of Sampling | # of Sampling Sites Exceeding Action Level | Typical Source of Contamination |
|-------------|----------------------|--------------|------|--|-------------------------------|-------------------|--|--|
| Lead | ppb | 15 | 0 | 3.53 | No | 8/2016 | 0 | Corrosion of household plumbing system; Erosion of natural deposits |
| Copper | ppm | 1.3 | 1.3 | 0.307 | No | 8/2016 | 0 | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |

III. Other Chemical and Radiological Contaminants

| Contaminant | Units of Measurement | MCLG | MCL | Level Detected | Violation (Y/N) | Range of Detection at Sampling Points | Date of Sample | Typical Source of Contamination |
|------------------|----------------------|------|-----|----------------|-----------------|---------------------------------------|---|---|
| Combined Radium* | pCi/L | 0 | 5 | 2.1 | No | <0.7-2.1 | 7/2010, 10/2010, 1/2011, 4/2011, 9/2014 | Erosion of natural deposits |
| Gross Alpha | pCi/L | 0 | 15 | 2.6 | No | <0.7-2.6 | 7/2010, 10/2010, 1/2011, 4/2011, 9/2014 | |
| Gross Beta** | pCi/L | 0 | 50 | 3.5 | No | 1.2-3.5 | 7/2010, 10/2010, 1/2011, 4/2011, 9/2014 | Erosion of natural deposits; decay of man-made deposits |
| Nitrate | ppm | 10 | 10 | <0.05 | No | N.D.-N.D. | 9/2016 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Fluoride | ppm | 4 | 4 | 1.61 | No | 1.07-1.61 | 9/2016 | Erosion of natural deposits |
| Trihalomethanes | ppb | 80 | 80 | 4.9 | No | -- | 9/2016 | By-product of naturally occurring organic matter and chlorine added to the water |
| Haloacetic Acids | ppb | 60 | 60 | 10.0 | No | -- | 9/2016 | |

* Since Radium-226 is an alpha emitter, Gross Alpha Activity is used in place of Radium-226 when Radium-226 has not been analyzed.

** The PMCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

IV. Unregulated Contaminants

| Contaminant | Units of Measurement | Level Detected | Violation (Y/N) | Range of Detection at Sampling Points | Date of Sample | Typical Source of Contamination |
|-------------|----------------------|----------------|-----------------|---------------------------------------|----------------|---|
| Sulfate | ppm | 11.9 | No | 11.7-11.9 | 9/2016 | EPA and State Regulations require us to monitor this contaminant while EPA reconsiders its MCL. |

V. Disinfectants

| Disinfectant | Units of Measurement | MRDLG | MRDL | Level Detected (Annual Average) | Violation (Y/N) | Range of Detection at Sampling Points | Year | Typical Source |
|--------------|----------------------|-------|------|---------------------------------|-----------------|---------------------------------------|------|---|
| Chlorine | ppm | 4 | 4 | 0.63 | No | 0.45-0.81 | 2016 | Water additive used to control microbes |

ADDITIONAL HEALTH INFORMATION

Samples collected in September 2016 indicated that the **drinking water from this water system contains sodium at concentrations of 85.8 mg/l (Well #1) and 81.6 mg/l (Well #2)**. Persons on a restricted sodium intake diet should not drink water containing a sodium concentration exceeding 20 mg/l.