

Bonny Doon School Water System Information, 2015

The Bonny Doon Union Elementary School District has its' own water system. In 2015, water from the system was tested and compared to U. S. Environmental Protection Agency (EPA) and State drinking water health standards. Water from the system met all EPA and State drinking water standards. This article reviews 2015's water quality data. Information is provided about where the School's water comes from, what it contains, and how it compares to State standards.

The school's water comes from an on-site well sunk approximately 300-feet into a fractured bedrock aquifer beneath the School. Water from this well is pumped to two storage tanks – a 10,000-gallon concrete tank and a 5,000-gallon polyethylene (plastic) tank – that supply potable water for domestic (drinking and hand washing) use at the school. The storage tanks are located on the east side of campus, west of Ice Cream Grade, at a high point on the campus to provide pressure throughout the distribution system. The source well is located on the northeast side of campus, adjacent to Ice Cream Grade and is connected to the storage tanks via underground piping.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. These people should seek advice about drinking water from their health care providers.

Contaminants that may be present in source water before it is treated include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic system, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agriculture application, and septic systems.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board – Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems, as well as in bottled water to provide the same protection for public health.

No contaminants were found in the School's water.

Trace levels of total coliforms, an "indicator" bacterium that poses no health risk, were detected in routine water distribution system samples collected in February, March, and December 2015. Based on resampling in both February and March 2015, we determined that the presence of bacteria was likely due to a combination of intermittent and/or "false positive" laboratory analyses. The likely cause of the intermittent detections of bacteria was determined to be small leaks/cracks with algal growth on the walls of the concrete storage tank. The "false positive" detections were attributed to faulty sample taps (hose bibs with leaky valve stems). We replaced the hose bibs with dedicated sample taps and then cleaned the storage tanks and disinfected the water system. The cracks in the concrete water tank could not be completely repaired, but were, cleaned, caulked and sealed as much as possible, and an ongoing cleaning program of the outside of the tank was initiated to limit the growth of algae in hopes of eliminating this possible bacteria source.

The detection in December, at the start of the school's winter break, was also attributed to the cracks in the concrete tank. These cracks may continue to be as source of intermittent bacteria detections until the tank is replaced. The tanks and water system were disinfected again in December. Repeat and/or follow-up sample results from all three occasions confirmed the

water system was free of bacteria. Subsequent sampling indicated the water system remained free of bacteria through the remainder of 2015 and into 2016. At no time was bacteria detected in the source water, which supplies the water system. The Santa Cruz County Health Services Agency – Department of Water Programs was informed of and monitored the situation and our response to it. We are working on a permanent solution of replacing the failing concrete tank.