THE UNIVERSITY OF GEORGIA
COOPERATIVE EXTENSION
Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

Soil, Plant, and Water Laboratory
2400 College Station Road
Athens, Georgia 30602-9105
Website: http://aesl.ces.uga.edu

Water Analysis Report

(CEC/CEA Signature)

Sample ID

Client Information	*Lab Information*	*County Information*
Christy Buckhodt	Lab #3606	**Lumpkin County**
2185 Woods River Lane	Received: Mar 23, 2018	26 Johnson Street, Suite A
Duluth, GA 30097	Completed: Mar 27, 2018	Dahlonega, GA 30533
Sample: 1	Printed: Mar 28, 2018	phone: 706-864-2275
Type: **Household Well**	Tests: W1 W32	e-mail: uge1187@uga.edu

Results

pH: 7.1 (Desired pH range 6.5 to 8.5)

Calculated Hardness: 64 ppm (3.7 gr/gal) - Moderately Hard Water -

(Water hardness is due to the presence of certain dissolved minerals, primarily calcium and magnesium.)

Parameter	Concentration in Sample	EPA Maximum Level*	Parameter	Concentration in Sample	EPA Maximum Level*
Aluminum (Al)	negligible	0.2 ppm (S)	Sodium (Na)	2.9 ppm	No Set Maximum
Boron (B)	negligible	No Set Maximum	Zinc (Zn)	negligible	5.0 ppm (S)
Calcium (Ca)	22.8 ppm	No Set Maximum			
Chromium (Cr)	negligible	100 ppb (P)			
Copper (Cu)	negligible	1.0 ppm (S) 1.3 ppm (P)			
Iron (Fe)	negligible	0.30 ppm (S)			
Magnesium (Mg)	1.8 ppm	No Set Maximum			
Manganese (Mn)	**0.12 ppm** [a]	0.05 ppm (S)			
Molybdenum (Mo)	negligible	No Set Maximum			
Nickel (Ni)	85.00 ppb	No Set Maximum			
Nitrate+Nitrite as N	0.14 ppm	10.0 ppm (P)			
Phosphorus (P)	negligible	No Set Maximum			
Potassium (K)	2.0 ppm	No Set Maximum			
Silica (SiO_2)	21.43 ppm	No Set Maximum			

* The letter (P) beside an EPA Maximum Level indicates that EPA has established a primary drinking water standard for this parameter. These are parameters which have been shown to cause adverse health effects. The letter (S) indicates that EPA has established a secondary drinking water standard for this parameter. These parameters are not generally considered threats to health, but can cause nuisance problems such as staining, tastes or odors.

ppm: Stands for parts per million. One part per million is equivalent to 1 pound of an element dissolved in 1,000,000 pounds of water. One part per million is the same as one milligram per liter (mg/L).

ppb: Stands for parts per billion. One part per billion is the same as one microgram per liter (µg/L).

NOTE: This test does not imply that this water is safe from bacteria or other chemicals that may be present. If you have concerns in these areas, contact your County Extension Agent.

Comments are listed on the next page

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[a] **Manganese (Mn)**

The concentration of manganese in this sample exceeds EPA's secondary maximum contaminant level of 0.05 parts per million (ppm) for drinking water. Manganese does not pose a threat to health, but can cause bitter or metallic taste and dark brown or black stains in laundry and plumbing fixtures. Water treatment is recommended only if these particular symptoms are causing a problem.

An ion-exchange water softener can be used to remove up to 5.0 ppm combined manganese and iron, but is not normally used unless water softening is also desired. Any oxidized manganese and/or iron should be removed by filtration ahead of the water softener.

An oxidizing filter may be used to remove up to 10.0 ppm combined manganese and iron. To work properly, some oxidizing filters require the pH of the water to be above 7.0. If pH adjustment is required, this can be accomplished by a neutralizing tank or soda ash injection ahead of oxidizing filter.

If the combined concentrations of iron and manganese exceed 10.0 ppm, or if disinfection is also desired, removal can be accomplished by chlorination followed by filtration. If desired, the chlorine residual may be removed with an activated carbon filter.

All parameters tested are within the permissible limits established for drinking water.