

Linda Poole
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COLORADO STATE UNIVERSITY
Soil, Water & Plant Testing Laboratory
Room A320, NESB
Fort Collins, CO 80523-1120
Phone: 970-491-5061 / Fax: 970-491-2930

Date Received: 1/19/2016
Date Reported: 1/26/2016

Billing:

DOMESTIC WATER ANALYSIS

LAB # W1182

SOURCE: 2 Standard wool wash

"Routine Package"

	<u>Results</u>	<u>Limit</u>	<u>Recommended</u>
Conductivity	3717		$\mu\text{mhos/cm}$
pH	7.2	6.5 to 8.5	
			<u>mg/L</u>
Calcium	13.9	N/A	
Magnesium	3.54	N/A	
Sodium	716	20	
Potassium	423	N/A	
Carbonate	<0.1	N/A	
Bicarbonate	1462	N/A	
Chloride	215	250	
Sulfate	603	250	
Nitrate	19.5	45	
Nitrate-Nitrogen	4.41	10	
Total Alkalinity			
as CaCO ₃	1198	400	
Total Hardness			grains per gallon
as CaCO ₃	49	300	2.9
Total Dissolved Solids	3,461	500	

"Metals" and "Individual Element" Analysis

	<u>Results</u>	<u>Limit</u>
	<u>mg/L</u>	<u>mg/L</u>
Boron	1.55	N/A
Phosphorus	<0.01	N/A
Aluminum	0.01	0.05 to 0.2
Iron	0.22	0.3
Manganese	0.07	0.05
Copper	0.04	1.3
Zinc	0.39	5.0
Nickel	0.05	0.1
Molybdenum	0.02	N/A
Cadmium	0.006	0.005
Chromium	0.021	0.10
Barium	0.04	2.0
Lead	0.010	0.015
Ammonium	*	N/A
Fluoride	*	4.0
Arsenic	*	0.010
Selenium	*	0.05
Mercury	*	0.002

* Not requested

COMMENTS:

Sulfate, alkalinity, total dissolved solids, manganese, cadmium and chromium exceed the EPA suggested limits for domestic use. Sodium exceeds the EPA drinking water health advisory limit for domestic use. The EPA has not set a maximum contaminant level (MCL) for sodium in municipal water supplies where it is required to have sodium below a legal limit. They have determined that there may be a health issue for individuals on sodium restricted diets if the sodium level exceeds 20 ppm.

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Billing:

LIVESTOCK WATER ANALYSIS

LAB # W1182 L

SOURCE: 2 Standard wool wash

"Routine Package"

"Metals" and "Individual Element" Analysis

	Recommended Limit	
Conductivity	3717	µmhos/cm
pH	7.2	
	mg/L	mg/L
Calcium	13.9	N/A
Magnesium	3.54	N/A
Sodium	716	N/A
Potassium	423	N/A
Carbonate	<0.1	N/A
Bicarbonate	1462	N/A
Chloride	215	N/A
Sulfate	603	N/A
Nitrate	19.53	443
Nitrate-Nitrogen	4.41	100
Total Alkalinity as CaCO ₃	1198	N/A
Total Hardness as CaCO ₃	49	N/A
		grains per gallon
		2.9
Total Dissolved Solids	3,461	10,000

	Recommended Limit	
	mg/L	mg/L
Boron	1.55	5.0
Phosphorus	<0.01	N/A
Aluminum	0.01	5.0
Iron	0.22	N/A
Manganese	0.07	N/A
Copper	0.04	0.5
Zinc	0.39	24.0
Nickel	0.05	N/A
Molybdenum	0.02	N/A
Cadmium	0.006	0.05
Chromium	0.021	1.0
Barium	0.04	1.0
Lead	0.01	0.1
Ammonium	*	N/A
Fluoride	*	2.0
Arsenic	*	0.2
Selenium	*	0.05
Mercury	*	0.01

* Not requested

COMMENTS:

This water is satisfactory for livestock use but may cause temporary diarrhea or be refused at first by animals not accustomed to the salt content. It is poor water to use for poultry and can cause watery feces, increased mortality and poor growth, especially in turkeys.

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Billing:

IRRIGATION WATER ANALYSIS

LAB # W1182 I

SOURCE: 2 Standard wool wash

"Routine Package"

	Results	Results
Conductivity	3717	µmhos/cm
pH	7.2	
pHc	7.2	
	mg/L	meq/L
Calcium	13.9	0.69
Magnesium	3.54	0.29
Sodium	716	31.15
Potassium	423	10.83
Carbonate	<0.1	<0.1
Bicarbonate	1462	24.0
Chloride	215	6.06
Sulfate	603	12.6
Nitrate	19.5	19.5
Nitrate-Nitrogen	4.4	4.4
Boron	1.55	
Pounds of Sulfate per acre foot	536	
Pounds of Nitrate per acre foot	12.0	

SAR 44.4

Salinity	Sodium
Hazard <u>Very High</u>	Hazard <u>Very High</u>

COMMENTS: This is very poor quality water and should not be used for irrigation.