Linda Poole
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Malta MT 59538

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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 # W1185

SOURCE: 5 GS aqua dye bath

"Routine Package"

	Results	Recommended Limit
Conductivity	2669	µmhos/cm
pH	4.9	6.5 to 8.5
		mg/L
Calcium	6.31	N/A
Magnesium	1.13	N/A
Sodium	780	20
Potassium	15.0	N/A
Carbonate	<0.1	N/A
Bicarbonate	1233	N/A
Chloride	132	250
Sulfate	515	250
Nitrate	<0.1	45
Nitrate-Nitrogen	<0.1	10
Total Alkalinity as $CaCO_3$	1011	400
Total Hardness as $CaCO_3$	20	300
		grains per gallon: 1.2
Total Dissolved Solids	2,683	500

"Metals" and "Individual Element" Analysis

	Results mg/L	Recommended Limit mg/L
Boron	1.55	N/A
Phosphorus	<0.01	N/A
Aluminum	0.41	0.05 to 0.2
Iron	0.26	0.3
Manganese	0.39	0.05
Copper	0.17	1.3
Zinc	3.71	5.0
Nickel	0.04	0.1
Molybdenum	0.01	N/A
Cadmium	0.005	0.005
Chromium	<0.01	0.10
Barium	0.04	2.0
Lead	0.005	0.015
Ammonium	*	N/A
Fluoride	*	4.0
Arsenic	*	0.010
Selenium	*	0.05
Mercury	*	0.002

* Not requested

COMMENTS: The pH, sulfate, alkalinity, total dissolved solids, aluminum and manganese 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 # W1185 L

SOURCE: 5 GS aqua dye bath

"Routine Package"

		Recommended Limit
Conductivity	2669	µmhos/cm
pH	4.9	

	mg/L	mg/L	
Calcium	6.31	N/A	
Magnesium	1.13	N/A	
Sodium	780	N/A	
Potassium	15.0	N/A	
Carbonate	<0.1	N/A	
Bicarbonate	1233	N/A	
Chloride	132	N/A	
Sulfate	515	N/A	
Nitrate	<0.1	443	
Nitrate-Nitrogen	<0.1	100	
Total Alkalinity as $CaCO_3$	1011	N/A	
Total Hardness as $CaCO_3$	20	N/A	1.2 grains per gallon
Total Dissolved Solids	2,683	10,000	

"Metals" and "Individual Element" Analysis

	mg/L	Recommended Limit mg/L
Boron	1.55	5.0
Phosphorus	<0.01	N/A
Aluminum	0.41	5.0
Iron	0.26	N/A
Manganese	0.39	N/A
Copper	0.17	0.5
Zinc	3.71	24.0
Nickel	0.04	N/A
Molybdenum	0.01	N/A
Cadmium	0.005	0.05
Chromium	<0.01	1.0
Barium	0.04	1.0
Lead	0.005	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 all classes of livestock and poultry. It may cause mild, temporary diarrhea in livestock and watery droppings in poultry not accustomed to the salt content.

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Billing:

IRRIGATION WATER ANALYSIS

LAB # W1185 I

SOURCE: 5 GS aqua dye bath

"Routine Package"

	Results	Results
Conductivity	2669	**µmhos/cm**
pH	4.9	
pHc	7.8	
	mg/L	**meq/L**
Calcium	6.31	0.31
Magnesium	1.13	0.09
Sodium	780	33.95
Potassium	15.0	0.38
Carbonate	<0.1	<0.1
Bicarbonate	1233	20.22
Chloride	132	3.73
Sulfate	515	10.72
Nitrate	<0.1	<0.1
Nitrate-Nitrogen	<0.1	<0.1
Boron	1.55	
Pounds of Sulfate per acre foot	458	
Pounds of Nitrate per acre foot	<0.1	

		Salinity Hazard	High	Sodium Hazard	Very High
SAR	75.2				

COMMENTS: This water is classified as a high salinity, high sodium irrigation water and would not be suitable for irrigation purposes. Soils irrigated with this water will accumulate salts, in particular sodium, which would eventually be detrimental to plants.