ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

February 5, 2019
United Water Conservation Dist
Attn: Mike Ellis
106 N. 8th St.
Santa Paula, CA 93060
Description : 01N21W06J05S:PTP Well #3
Project : Pumping Through Pipeline

Lab ID : SP 1901132-001
Customer ID : 2000200

Sampled On : January 24, 2019
Sampled By : Ruben Sanchez
Received On : January 24, 2019
Matrix : Ground Water

General Irrigation Suitability Analysis

Test Description	Result				Graphical Results Presentation				
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	55	2.7	30	150	**				
Magnesium	24	2	21	65	**				
Potassium	4	0.1	1	11	**				
Sodium	102	4.4	48	280					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	280	4.6	47	760	**				
Sulfate	184	3.8	39	500	**				
Chloride	45	1.3	13	120					
Nitrate	< 0.4	0	0	0					
Nitrate Nitrogen	< 0.1			0					
Fluoride	0.3	0.016	0	0.8					
Minor Elements									
Boron	0.30			0.82					
Copper	< 0.01			0					
Iron	0.40			1.1					
Manganese	0.020			0.054					
Zinc	0.040			0.11					
TDS by Summation	694			1900					
Other									
pH	7.4			units					
E. C.	0.919			dS/m					
SAR	2.9								
Crop Suitability									
No Amendments	Good								
With Amendments	Good								
Amendments									
Gypsum Requirement	0.5			Tons/AF					
Sulfuric Acid (98%)	16			oz/1000Gal	Or 39 oz/1000Gal of urea Sulfuric Acid (15/49)				
Leaching Requirement	7			%					

Good — Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.
** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter

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February 5, 2019

United Water Conservation Dist

Lab ID : SP 1901132-001
Customer ID : 2000200
Description : 01N21W06J05S:PTP Well #3

Micro Irrigation System Plugging Hazard

Test Description	Result		Graphical Results Presentation (Slight / Moderate / Severe)
Chemical			
Manganese	0.02	mg/L	
Iron	0.4	mg/L	
TDS by Summation	694	mg/L	
No Amendments			
pH	7.4	units	
Alkalinity (As CaCO3)	230	mg/L	
Total Hardness	236	mg/L	
With Amendments			
Alkalinity (As CaCO3)	46	mg/L	
Total Hardness	46	mg/L	
pH	5.4 - 6.7	units	

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:
The Amendments recommended on the previous pages include:

Gypsum:
This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Sulfuric Acid and the larger amount when applying only Gypsum.

Sulfuric Acid:
These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F. Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications.
Please contact us if you have any questions.

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FRUIT GROWERS LABORATORY, INC.

Scott Bucy

Scott Bucy, Director of Ag. Services

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

February 5, 2019
United Water Conservation Dist
Attn: Mike Ellis
106 N. 8th St.
Santa Paula, CA 93060
Description : 01N22W13D03S:PTP Well #5
Project : Pumping Through Pipeline

Lab ID : SP 1901132-003
Customer ID : 2000200

Sampled On : January 24, 2019
Sampled By : Ruben Sanchez
Received On : January 24, 2019
Matrix : Ground Water

General Irrigation Suitability Analysis

Test Description	Result				Graphical Results Presentation				
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	148	7.4	49	400	**				
Magnesium	34	2.8	19	92	**				
Potassium	6	0.15	1	16	**				
Sodium	107	4.7	31	290					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	240	3.9	31	650	**				
Sulfate	359	7.5	60	980	**				
Chloride	40	1.1	9	110					
Nitrate	< 0.4	0	0	0					
Nitrate Nitrogen	< 0.1			0					
Fluoride	0.2	0.011	0	0.5					
Minor Elements									
Boron	0.40			1.1					
Copper	< 0.01			0					
Iron	0.55			1.5					
Manganese	0.18			0.49					
Zinc	0.020			0.054					
TDS by Summation	934			2500					
Other									
pH	7.7			units					
E. C.	1.21			dS/m					
SAR	2.1								
Crop Suitability									
No Amendments	Fairly Good								
With Amendments	Good								
Amendments									
Gypsum Requirement	0.0			Tons/AF					
Sulfuric Acid (98%)	14			oz/1000Gal	Or 34 oz/1000Gal of urea Sulfuric Acid (15/49)				
Leaching Requirement	9.5			%					

Good — Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.
** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter

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February 5, 2019

United Water Conservation Dist

Lab ID : SP 1901132-003
Customer ID : 2000200
Description : 01N22W13D03S:PTP Well #5

Micro Irrigation System Plugging Hazard

Test Description	Result		Graphical Results Presentation
			Slight / Moderate / Severe
Chemical			
Manganese	0.18	mg/L	
Iron	0.55	mg/L	
TDS by Summation	934	mg/L	
No Amendments			
pH	7.7	units	
Alkalinity (As CaCO3)	200	mg/L	
Total Hardness	509	mg/L	
With Amendments			
Alkalinity (As CaCO3)	40	mg/L	
Total Hardness	40	mg/L	
pH	5.4 - 6.7	units	

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:
The Amendments recommended on the previous pages include:

Sulfuric Acid:
These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F. Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications.
Please contact us if you have any questions.

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Scott Bucy

Scott Bucy, Director of Ag. Services

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

February 5, 2019
United Water Conservation Dist
Attn: Mike Ellis
106 N. 8th St.
Santa Paula, CA 93060
Description : 01N22W01M03S:PTP Well #4
Project : Pumping Through Pipeline

Lab ID : SP 1901132-004
Customer ID : 2000200

Sampled On : January 24, 2019
Sampled By : Ruben Sanchez
Received On : January 24, 2019
Matrix : Ground Water

General Irrigation Suitability Analysis

Test Description	Result				Graphical Results Presentation				
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	113	5.6	45	310	**				
Magnesium	30	2.5	20	82	**				
Potassium	5	0.13	1	14	**				
Sodium	100	4.3	35	270					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	240	3.9	31	650	**				
Sulfate	361	7.5	60	980	**				
Chloride	40	1.1	9	110					
Nitrate	< 0.4	0	0	0					
Nitrate Nitrogen	< 0.1			0					
Fluoride	0.2	0.011	0	0.5					
Minor Elements									
Boron	0.50			1.4					
Copper	0.030			0.082					
Iron	0.34			0.92					
Manganese	0.14			0.38					
Zinc	< 0.02			0					
TDS by Summation	889			2400					
Other									
pH	7.3			units					
E. C.	1.22			dS/m					
SAR	2.2								
Crop Suitability									
No Amendments	Good								
With Amendments	Good								
Amendments									
Gypsum Requirement	0.04			Tons/AF					
Sulfuric Acid (98%)	14			oz/1000Gal	Or 34 oz/1000Gal of urea Sulfuric Acid (15/49)				
Leaching Requirement	9.5			%					

Good — Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.
** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter

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February 5, 2019

United Water Conservation Dist

Lab ID : SP 1901132-004
Customer ID : 2000200
Description : 01N22W01M03S:PTP Well #4

Micro Irrigation System Plugging Hazard

Test Description	Result		Graphical Results Presentation
			Slight / Moderate / Severe
Chemical			
Manganese	0.14	mg/L	
Iron	0.34	mg/L	
TDS by Summation	889	mg/L	
No Amendments			
pH	7.3	units	
Alkalinity (As CaCO3)	200	mg/L	
Total Hardness	405	mg/L	
With Amendments			
Alkalinity (As CaCO3)	40	mg/L	
Total Hardness	40	mg/L	
pH	5.4 - 6.7	units	

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:
The Amendments recommended on the previous pages include:

Gypsum:
This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Sulfuric Acid and the larger amount when applying only Gypsum.

Sulfuric Acid:
These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F. Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications.
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February 5, 2019
United Water Conservation Dist
Attn: Mike Ellis
106 N. 8th St.
Santa Paula, CA 93060
Description : 02N21W32E01S:PTP Well #2
Project : Pumping Through Pipeline

Lab ID : SP 1901132-005
Customer ID : 2000200

Sampled On : January 24, 2019
Sampled By : Ruben Sanchez
Received On : January 24, 2019
Matrix : Ground Water

General Irrigation Suitability Analysis

Test Description	Result				Graphical Results Presentation				
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	90	4.5	35	240	**				
Magnesium	37	3	24	100	**				
Potassium	5	0.13	1	14	**				
Sodium	121	5.3	41	330					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	260	4.3	32	710	**				
Sulfate	362	7.5	57	980	**				
Chloride	48	1.4	10	130					
Nitrate	< 0.4	0	0	0					
Nitrate Nitrogen	< 0.1			0					
Fluoride	0.2	0.011	0	0.5					
Minor Elements									
Boron	0.50			1.4					
Copper	< 0.01			0					
Iron	0.49			1.3					
Manganese	0.040			0.11					
Zinc	< 0.02			0					
TDS by Summation	923			2500					
Other									
pH	7.2			units					
E. C.	1.27			dS/m					
SAR	2.7								
Crop Suitability									
No Amendments	Good								
With Amendments	Good								
Amendments									
Gypsum Requirement	0.2			Tons/AF					
Sulfuric Acid (98%)	15			oz/1000Gal	Or 36 oz/1000Gal of urea Sulfuric Acid (15/49)				
Leaching Requirement	10			%					

Good — Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.
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February 5, 2019

United Water Conservation Dist

Lab ID : SP 1901132-005
Customer ID : 2000200
Description : 02N21W32E01S:PTP Well #2

Micro Irrigation System Plugging Hazard

Test Description	Result		Graphical Results Presentation
			Slight / Moderate / Severe
Chemical			
Manganese	0.04	mg/L	
Iron	0.49	mg/L	
TDS by Summation	923	mg/L	
No Amendments			
pH	7.2	units	
Alkalinity (As CaCO3)	210	mg/L	
Total Hardness	377	mg/L	
With Amendments			
Alkalinity (As CaCO3)	42	mg/L	
Total Hardness	42	mg/L	
pH	5.4 - 6.7	units	

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:
The Amendments recommended on the previous pages include:

Gypsum:
This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Sulfuric Acid and the larger amount when applying only Gypsum.

Sulfuric Acid:
These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F. Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications.
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