



## Water Treatment System Analysis Report

(CEC/CEA Signature)

### Sample ID

<b>Client Information</b>	therainsaver@icloud.com 404-234-1358	<b>Lab Information</b>	<b>County Information</b>
Steve Williams	<b>Sample Address</b>	Lab #4957	<b>Fulton County</b>
1015 Arden Avenue	WAWA	Received: Mar 1, 2021	1 Margaret Mitchell Square, Ste 109
Atlanta, GA 30310	1442 Richland Rd.	Completed: Mar 12, 2021	Atlanta, GA 30303
Sample: Bioponica	Atlanta GA 30310	Printed: Mar 15, 2021	phone: 404-730-7000
Type: <b>Rainwater Cistern</b>		Tests: W2	e-mail: uge1121@uga.edu

### Results

pH: 7.0 (Desired pH range 6.5 to 8.5)

Calculated Hardness: 0 ppm (0.0 gr/gal) - Soft Water -

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

**Saturation Index: -0.8 - Balanced: Treatment Not Needed<sup>a</sup>**

Parameter	Concentration in Sample	EPA Maximum Level*	Parameter	Concentration in Sample	EPA Maximum Level*
Alkalinity	90 ppm		Manganese (Mn)	negligible	0.05 ppm (S)
Aluminum (Al)	negligible	0.2 ppm (S)	Molybdenum (Mo)	negligible	No Set Maximum
Boron (B)	negligible	No Set Maximum	Nickel (Ni)	negligible	No Set Maximum
Calcium (Ca)	negligible	No Set Maximum	Nitrate-Nitrogen (NO <sub>3</sub> <sup>-</sup> -N)	negligible	10.0 ppm (P)
Carbon Dioxide (CO <sub>2</sub> )	20.13 ppm				
Chloride (Cl)	negligible	250 ppm (S)	Phosphate (PO <sub>4</sub> )	negligible	
Chromium (Cr)	negligible	100 ppb (P)	Phosphorus (P)	negligible	No Set Maximum
Conductivity (Specific Conductance @ 25°C)	4 µS/cm <sup>b</sup> (µS/cm = µmhos/cm)		Potassium (K)	negligible	No Set Maximum
			Silica (SiO <sub>2</sub> )	negligible	No Set Maximum
Copper (Cu)	0.11 ppm	1.0 ppm (S)	Sodium (Na)	negligible	No Set Maximum
		1.3 ppm (P)	Sulfate (SO <sub>4</sub> )	negligible	250 ppm (S)
Fluoride (F)	negligible	2.0 ppm (S) 4.0 ppm (P)	Total Dissolved Solids (TDS) - Estimated	2 ppm	500 ppm (S)
Iron (Fe)	negligible	0.30 ppm (S)	Zinc (Zn)	0.09 ppm	5.0 ppm (S)
Magnesium (Mg)	negligible	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**

### Learning for Life

# Water Treatment System Analysis Report

## Sample ID

<b>Client Information</b> Steve Williams 1015 Arden Avenue Atlanta, GA 30310 Sample: Bioponica Type: <b>Rainwater Cistern</b>	therainsaver@icloud.com 404-234-1358 <b>Sample Address</b> WAWA 1442 Richland Rd. Atlanta GA 30310	<b>Lab Information</b> Lab #4957 Received: Mar 1, 2021 Completed: Mar 12, 2021 Printed: Mar 15, 2021 Tests: W2	<b>County Information</b> <b>Fulton County</b> 1 Margaret Mitchell Square, Ste 109 Atlanta, GA 30303 phone: 404-730-7000 e-mail: uge1121@uga.edu
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### <sup>a</sup> Saturation Index

The saturation index is used to predict the corrosion or scaling property of this water. Corrosion of the pump, pipe, and fixtures can cause high metal levels in the water, especially copper and lead. Treatment for corrosion would consist of pH neutralization with a calcium or magnesium base (ie., calcite) filter bed. Corrosion problems can be reduced by using non-metal plumbing (ie., PVC). Treatment for scaling consists of water softening to reduce hardness. Scaling problems can be reduced by lowering the hot water temperature.

### <sup>b</sup> Conductivity

Conductivity is the measure of the ability of the water to conduct electricity. The units for conductivity are usually expressed either as micro-Siemens ( $\mu\text{S}$ ) or micro-mhos ( $\mu\text{mhos}$ ) per centimeter ( $\mu\text{S}/\text{cm} = \mu\text{mhos}/\text{cm}$ ). Conductivity increases as the amount of dissolved ionic solids increases and is sometimes called "soluble salts". Dissolved inorganic compounds are relatively good conductors; conversely, dissolved organic compounds are poor conductors. The conductivity of distilled water usually ranges from 0.5 to 3  $\mu\text{S}/\text{cm}$  and most drinking water in the United States ranges from 50 to 1500  $\mu\text{S}/\text{cm}$ .

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