



# Water Quality Report 2017



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## State of the Art Purification

Niagara Bottling utilizes state of the art purification, filtration and disinfection technologies to produce safe and refreshing products for our customers to enjoy. Niagara Bottling is pleased to provide you this water quality report.



## History

It all started back in 1963 when Andrew Peykoff Sr. began to bottle high quality, low cost Niagara water in 5 gallon glass containers for home and office delivery. With his insurmountable work ethic, integrity and customer service, Niagara soon became a household name in southern California. The customer base quickly expanded and Niagara started providing single-serve private label bottled water to grocery, club and convenience stores as well as wholesale customers all the while maintaining the family owned-business values.

Over the following decades, Niagara made significant advancements in high speed manufacturing and innovative bottle design; it's no wonder why Niagara is now considered the largest family-owned and operated bottled water company in the United States. The company now has 25 manufacturing facilities and is continuing to grow under the President and CEO, Andy Peykoff II.



## Mission Statement

Niagara's mission is to be the premier national bottled water supplier by providing our customers unmatched quality, price, and service. We achieve this through the relentless pursuit of cutting-edge bottling technology, vertical integration and ongoing improvement of process efficiencies. Ultimately our mission can only be obtained through our most important competitive advantage, our people. The hard work, integrity and dedication of every Niagara team member will shape the future success of our company for generations to come.

## Light Weight Bottles & Vertical Integration

As innovators, Niagara is always looking for ways to improve through technological advancements and processes that help reduce our impact on the environment. Our newest light weight package completely eliminates the need for a cardboard tray and the cases take up less pallet space which allows us to ship more water per order and subsequently reduce our CO<sub>2</sub> emissions.

Since 2008 Niagara has progressively reduced the amount of plastic in the bottles, achieving an average reduction of 31% gram weight in the bottle and over 51% gram weight in the cap. In addition to being lightweight, our bottles and caps are 100% recyclables. Through this optimization and several other initiatives Niagara has achieved:

- **789 Million Pounds CO<sub>2</sub> Saved since 2008**
  - Reduced power usage to manufacture the container
    - 38.2% efficiency gains equivalent to over 59 million pounds of CO<sub>2</sub>
  - Carry more water and less packaging material, and optimized transportation routes
    - Over 205 million pounds of CO<sub>2</sub> saved
  - Completely eliminated the use of cardboard tear sheets.
    - Over 37 million pounds of cardboard, equivalent to more than 58 million pounds of CO<sub>2</sub>

Our goal is to continue with light weighting and process optimization through innovative science and technology. This is all made possible by our vertically integrated process where bottles are molded into shape and filled all on the same line. Complete process control is easily maintained and constantly improved in our own facilities and according to our process capabilities.



# Our Commitment To Quality

All water bottled by Niagara comes from carefully sourced springs, wells and/or municipal water supplies. Each source is tested as it enters our facility to ensure compliance with state and federal regulations. Product is then monitored and tested through the purification and bottling process to ensure we continue to make a consistently high quality product. Screening is conducted for more than 190 chemical attributes as well as physical and flavor characteristics. This level of testing surpasses the requirements set in place by the United States Food and Drug Administration (FDA) or the Environmental Protection Agency (EPA).

## Audits

All Niagara facilities are audited on a monthly basis by the Niagara Quality Assurance team and on an annual basis by third party auditors such as the National Sanitation Foundation (NSF), FDA and the International Bottled Water Association (IBWA).

Additionally, Niagara participates in regular customer audits to ensure compliance with varying customer requirements. These audits help to ensure that the company meets federal and industry standards for sanitation and process controls. For the last six years, all Niagara facilities have been certified as SQF Level 3 through NSF or Eurofins, which is the highest level of certification attainable. SQF level 3 certification is internationally recognized by the Global Food Safety Initiative (GFSI).

## Production

Niagara utilizes high speed manufacturing equipment and each production line has the capability to produce 1200 bottles of water per minute. Maintaining quality at such high speeds is critical to our success. This is why Niagara utilizes state of the art technology to continuously perform visual checks during the entire production process. Visual check systems are able to recognize and reject bottles that have defects such as under-filled bottles, mis-aligned caps, improperly aligned labels and much more. The QA team also monitors several aspects of the water purification process on a daily basis to ensure that we are producing a safe and consistent product. On-site QA laboratories ensure that results are obtained quickly.

## Certified Plant Operators

Our product quality and overall success depends on the knowledge and strength of our team members. All Quality Assurance team members are required to pass an internationally recognized exam on bottled water manufacturing and quality which is administered by IBWA.



# Regulations



With its own set of testing requirements and good manufacturing standards, the bottled water industry is one of the most highly regulated in the United States. Bottled water is regulated by the FDA which is also responsible for regulating the food and pharmaceutical industries. Tap water on the other hand is regulated by the EPA. Under the Safe Drinking Water Act, FDA regulations for bottled water must be at least as stringent as the EPA's Primary Drinking Water Standards (known as Maximum Contaminant Levels). Bottled water is generally required to be tested for the same parameters as tap water, but the standards are, in many cases, stricter than for tap water. Ensuring the safety of the water is our primary objective in providing bottled water products to our customers.

## Water Standards of Identity

Since the bottled water industry is regulated by the FDA, they have established standards of identity for several types of bottled water. This ensures that each type of bottled water meets minimum standards. The following are examples of types of bottled water on the market. Niagara currently bottles spring water, purified water and purified water with minerals added.



**Spring Water** - Bottled water derived from an underground formation from which water flows naturally to the surface of the earth. Spring water can only be collected at the spring or through a borehole tapping the underground formation feeding the spring.

**Purified & Distilled Water** - Bottled water that has been produced by distillation, deionization, reverse osmosis or other suitable processes while meeting the definition of purified water in the United States Pharmacopoeia. Other suitable names for bottled water treated by one of the above processes may include "distilled water" if it is produced by distillation, "deionized water" if it is produced by deionization, etc.

**Mineral Water** - Bottled water containing not less than 250 parts per million total dissolved solids. Mineral water is distinguished from other types of bottled water by its constant level and relative proportions of mineral and trace elements at the point of emergence from the source,. No minerals can be added to this product.

**Sparkling Bottled Water** - Water that after treatment, and possible replacement with carbon dioxide, contains the same amount of carbon dioxide that it had as it emerged from the source. Sparkling bottled waters may be labeled as "sparkling drinking water", "sparkling mineral water", "sparkling spring water", etc

**Artesian water/Artesian Well Water** - Bottled water from a well that taps a confined aquifer (a water-bearing underground layer of rock or sand) in which the water level stands at some height above the top of the aquifer.

**Well Water** - Bottled water from a hole bored, drilled or otherwise constructed in the ground which taps the water aquifer.

# Purified Water, Distilled Water and Purified Water with Minerals Added



Each bottle of water begins with a carefully selected well or municipal water source. The water is initially processed using a multi-step filtration process depending on the source. Next, the water is purified using a reverse osmosis or distillation system and then it is disinfected with ozone just prior to bottling.

Our purified with minerals added product has one additional step, just before the water is disinfected with ozone, it is re-mineralized. We use just the right combination of minerals to give the product a smooth and refreshing taste.



# Spring Water



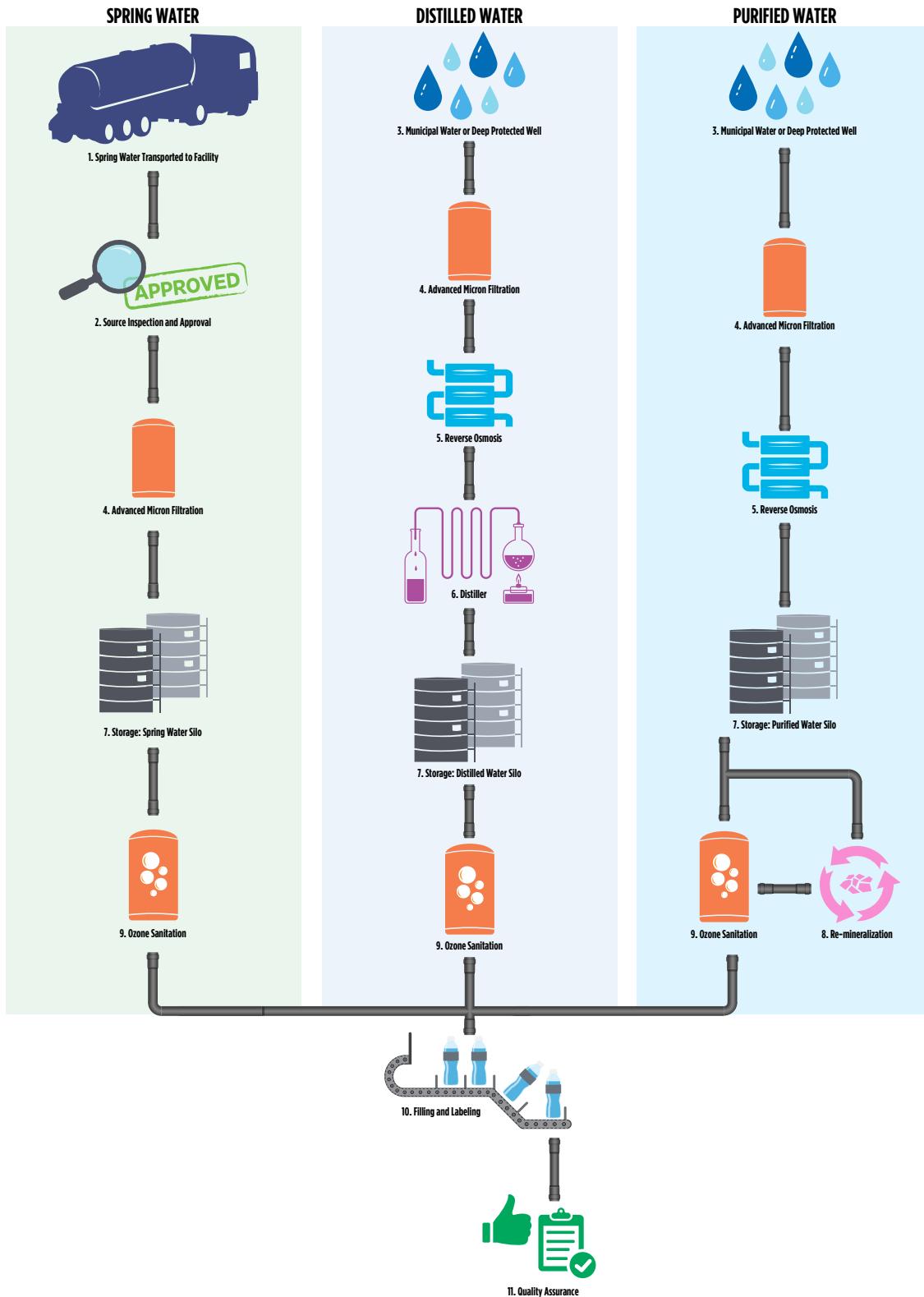
Providing great tasting spring water starts with finding the best tasting, highest quality source. All spring sources must undergo an intense inspection before it is approved for use in Niagara products. The sources are inspected by our trained and experienced Quality Assurance staff which includes microbiologists, chemists, and hydro-geologists. During the inspection process, all aspects of the source are examined including security, treatment at the source, water chemistry, and environmental impact.

Once a spring is approved for use the spring water is collected and then loaded onto dedicated water tankers and delivered to our bottling facilities.

Water is tested at our facility to assure quality and safety prior to use. It is then filtered down to 0.2 microns and disinfected with ozone just prior to bottling.



# Spring, Distilled, Purified & Purified with Minerals Added Water Processing



# Water Processing



1. In the spring water process, water from an approved source is transported to the bottling facility on dedicated water tankers.
2. In order for a source to be approved, the water source analytical data and the spring site must be carefully evaluated by our QA team which includes microbiologists, chemists, and hydro-geologists. The quality assurance department frequently collects samples to monitor microbiological and chemical characteristics.
3. For all other types of bottled water, the source may be either a municipal or deep protected well which is directly connected to the bottling facility. These sites also go through a similar approval process.
4. Depending on the source, the water will be initially processed by carbon filtration, aeration and/or UV filtration. All water types will then pass through a 0.2 micron pharmaceutical grade filter to remove any microbiological contaminants.
5. Purified, purified with minerals and distilled products will then pass through multiple reverse osmosis units. These high pressure pumps and semi-permeable membranes are used to remove all remaining impurities.
6. In the distilled process, the water from the reverse osmosis units will then pass through the distiller where the evaporation and subsequent collection of water by condensation is an addition purification step.
7. Once the water has been processed by filtration and reverse osmosis it will then be stored temporarily in storage silo ready for sanitizing and bottling. Each manufacturing facility has separate silos dedicated to each water type.
8. All waters are sanitized by ozone. Ozone is a specialized molecule consisting of pure oxygen which is highly effective at sanitizing water. This process is continuously monitored by the Quality Assurance department.
9. Purified water with minerals added products must go through an additional re-mineralization step that occurs just after ozone contact tank.
10. Bottles are now ready to be filled and labeled. State of the art bottling equipment is used to bottle the finished product. Each bottle is given a unique code to identify the bottling plant, production line, time and date.
11. Products are given one final checked for quality assurance prior to shipping and retain samples are collected daily for each production run. These samples are analyzed by our internal lab to ensure adherence to company specifications and standards. Some samples are also sent out to third party labs to ensure compliance with state and federal regulatory standards.



# Water Analysis Report (2017)

				Water Type		
Substance	Units	MDL*	MCL**	Level Found***		
<b>Physical Quality</b>						
Alkalinity as CaCO <sub>3</sub>	mg/L CaCO <sub>3</sub>	5	NR	0.52	9.69	63.55
Color	Color unit	5	15	ND	ND	ND
Specific Conductance	umhos/cm	0.1	NR	3.95	45.79	170.09
Hardness, Total	mg/L CaCO <sub>3</sub>	2	NR	ND	5.65	72.04
Odor, Threshold	TON	1	3	1.74	1.79	2.26
Solids, Total Dissolved ◊	mg/L	5	500	ND	29.63	109.74
Turbidity	NTU	0.1	5	0.07	0.05	0.08
pH ◊		0.01	6.5 - 8.5	6.14	6.93	7.15
Bicarbonate	mg/L HCO <sub>3</sub>	5	NR	0.64	11.71	77.48
<b>Disinfect. residuals/ By Products</b>						
Bromate	ug/L	5	10	0.122	0.278	3.946
Chloramine, Total	mg/L	0.05	4	ND	ND	ND
Chlorite	ug/L	10	1000	ND	ND	ND
Chlorine Dioxide	mg/L	0.1	0.8	ND	ND	ND
Total haloacetic acid	ug/L	1	60	ND	ND	ND
Chlorine	mg/L	0.05	4	ND	ND	ND
<b>Radiologicals</b>						
P1 gross Alpha	pCi/L	3	15	ND	0.123	0.638
P1 Gross Beta	pCi/L	4	50 ‡	ND	2.875	0.990
Total Radium 226+228	pCi/L	1	5	ND	ND	0.110
Uranium	mg/L	0.001	0.03	ND	ND	0.317
<b>Inorganic Chemicals</b>						
Aluminum	mg/L	0.01	0.2	ND	ND	ND
Antimony	mg/L	0.0005	0.006	ND	ND	ND
Arsenic	mg/L	0.002	0.01	ND	ND	0.0003
Barium	mg/L	0.001	2	ND	ND	0.028
Beryllium	mg/L	0.0005	0.004	ND	ND	ND
Bromide	ug/L	10	NR	ND	ND	11.213

# Water Analysis Report (2017)



Substance	Units	MDL*	MCL**	Water Type		
				Purified & Distilled Water	Purified Water with Minerals added for Taste	Spring Water
Cadmium	mg/L	0.0002	0.005	ND	ND	ND
Calcium	mg/L	0.2	NR	ND	2.418	18.952
Chloride	mg/L	2	250	ND	4.751	6.422
Chromium	mg/L	0.001	0.1	0.0002	ND	0.0002
Copper	mg/L	0.001	1	ND	ND	ND
Cyanide, Total	mg/L	0.01	0.2	ND	ND	ND
Fluoride	mg/L	0.1	2.4	0.002	0.001	0.031
Iron	mg/L	0.02	0.3	ND	ND	ND
Lead	mg/L	0.001	0.005	ND	ND	ND
Magnesium	mg/L	0.02	NR	0.010	0.018	5.942
Manganese	mg/L	0.001	0.05	ND	ND	0.0003
Mercury	mg/L	0.0002	0.002	ND	ND	ND
Nickel	mg/L	0.001	0.1	ND	ND	ND
Nitrogen, Nitrate	mg/L N	0.05	10	0.017	0.029	1.067
Nitrogen, Nitrite	mg/L N	0.025	1	ND	ND	ND
Total Nitrate + Nitrite- Nitrogen	mg/L	0.02	10	0.017	0.029	1.067
Potassium	mg/L	0.5	NR	ND	3.985	1.187
Selenium	mg/L	0.002	0.05	ND	ND	ND
Silver	mg/L	0.001	0.1	ND	ND	ND
Sodium	mg/L	0.5	250	0.193	3.802	5.839
Sulfur, Sulfate ◊	mg/L	0.5	250	0.021	1.381	5.596
Surfactants (MBAS)	mg/L	0.2	0.002	ND	0.003	ND
Thallium	mg/L	0.0002	0.001	ND	ND	ND
Phenolics	mg/L	0.001	5	ND	0.00007	ND
Zinc	mg/L	0.01	NR	ND	ND	ND
<b>Organic Chemicals</b>						
Diquat	ug/L	0.4	20	ND	ND	ND
Endothall	ug/L	9	100	ND	ND	ND
Glyphosphate	ug/L	6	700	ND	ND	ND
2,3,7,8- TCDD	pg/L	10	30	ND	ND	ND
Carbofuran	ug/L	1	40	ND	ND	ND
Methomyl	ug/L	ND	NR	ND	ND	ND
Oxamyl	ug/L	1	200	ND	ND	ND
2,4,5-TP (herbicide)	ug/L	0.2	50	ND	ND	ND



# Water Analysis Report (2017)

Substance	Units	MDL*	MCL**	Water Type		
				Purified & Distilled Water	Purified Water with Minerals added for Taste	Spring Water
2,4-D (herbicide)	ug/L	0.1	70	ND	ND	ND
Bentazon (herbicide)	ug/L	0.2	18 ‡	ND	ND	ND
Dalapon (herbicide)	ug/L	1	200	ND	ND	ND
Dinoseb (herbicide)	ug/L	0.2	7	ND	ND	ND
Pentachlorophenol (herbicide)	ug/L	0.04	1	ND	ND	ND
Picloram (herbicide)	ug/L	0.1	500	ND	ND	ND
Chlordane (pesticide)	ug/L	0.2	2	ND	ND	ND
PCB 1016 (pesticide)	ug/L	0.3	0.5	ND	ND	ND
PCB 1221 (pesticide)	ug/L	0.4	0.5	ND	ND	ND
PCB 1232 (pesticide)	ug/L	0.4	0.5	ND	ND	ND
PCB 1242 (pesticide)	ug/L	0.3	0.5	ND	ND	ND
PCB 1248 (pesticide)	ug/L	0.2	0.5	ND	ND	ND
PCB 1254 (pesticide)	ug/L	0.2	0.5	ND	ND	ND
PCB 1260 (pesticide)	ug/L	0.3	0.5	ND	ND	ND
Total PCBs (pesticide)	ug/L	0.4	0.5	ND	ND	ND
Toxaphene (pesticide)	ug/L	1	3	ND	ND	ND
Alachlor	ug/L	0.1	2	ND	ND	ND
Atrazine	ug/L	0.2	3	ND	ND	ND
Benzopyrene	ug/L	0.1	0.2	ND	ND	ND
Bisadipate	ug/L	2	400	ND	ND	ND
Bisphthalate	ug/L	2	6	ND	ND	ND
Endrin	ug/L	0.1	2	ND	ND	ND
Heptachlor	ug/L	0.1	0.4	ND	ND	ND
Heptachlor Epoxide	ug/L	0.1	0.2	ND	ND	ND
Hexachlorobenzene	ug/L	0.1	1	ND	ND	ND
Hexachlorocyclopentadiene	ug/L	0.1	50	ND	ND	ND
Lindane	ug/L	0.1	0.2	ND	ND	ND
Methoxychlor	ug/L	0.1	40	ND	ND	ND
Molinate	ug/L	0.1	20 ‡	ND	ND	ND
Simazine	ug/L	0.2	4	ND	ND	ND
1,2-dibromo-3chloropropane	ug/L	0.01	0.2	ND	ND	ND
Ethylene Dibromide	ug/L	0.01	0.05	ND	ND	ND
1,1,1-Trichloroethane	ug/L	0.5	200	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	0.5	1 ‡	ND	ND	ND
1,1,2-Trichloroethane	ug/L	0.5	5	ND	ND	ND

# Water Analysis Report (2017)



Substance	Units	MDL*	MCL**	Water Type		
				Purified & Distilled Water	Purified Water with Minerals added for Taste	Spring Water
1,1-Dichloroethane	ug/L	0.5	5 ‡	ND	ND	ND
1,1-Dichloroethylene	ug/L	0.5	7	ND	ND	ND
1,2,4-Trichlorobenzene	ug/L	0.5	70	ND	ND	ND
1,2-Dichlorobenzene	ug/L	0.5	600	ND	ND	ND
1,2-Dichloroethane	ug/L	0.5	5	ND	ND	ND
1,2-Dichloropropane	ug/L	0.5	5	ND	ND	ND
1,3-Dichloropropene	ug/L	0.5	0.5 ‡	ND	ND	ND
1,4-Dichlorobenzene	ug/L	0.5	75	ND	ND	ND
Benzene	ug/L	0.5	5	ND	ND	ND
Carbon Tetrachloride	ug/L	0.5	5	ND	ND	ND
Chlorobenzen	ug/L	0.5	100	ND	ND	ND
cis-1,2-Dichlorethylene	ug/L	0.5	70	ND	ND	ND
Ethyl Benzene	ug/L	0.5	700	ND	ND	ND
Methyl-tert-butyl Ether (MTBE)	ug/L	0.5	13 ‡	ND	ND	ND
Methylene Chloride	ug/L	0.5	5	ND	ND	ND
Styrene	ug/L	0.5	100	ND	ND	ND
Tetrachloroethylene	ug/L	0.5	5	ND	ND	ND
Toluene	ug/L	0.5	1000	ND	ND	0.026
Total trihalomethanes	ug/L	0.5	80	1.241	1.284	0.275
Total Xylenes	ug/L	0.5	10000	ND	ND	ND
trans-1,2-Dichloroethylene	ug/L	0.5	100	ND	ND	ND
trans-1,3-Dichloropropene	ug/L	0.5	NR	ND	ND	ND
Trichloroethylene	ug/L	0.5	5	ND	ND	ND
Trichlorofluormethane (Freon 11)	ug/L	0.5	150 ‡	ND	ND	ND
Vinyl Chloride	ug/L	0.5	2	ND	ND	ND

◊ Secondary Standard. Non-enforceable guidelines regulating contaminants that may cause aesthetic or cosmetic effects in drinking water.  
NR- Not listed in state or federal drinking water regulations.

\* MDL – Method Detection Limit. The values reflect the lowest concentration of each substance that can be accurately quantified by the applicable testing method.

\*\* MCL – Maximum Contaminant Level. The highest level of a substance allowed by law in drinking water (bottled or tap). The MCLs shown are the federal MCLs set by the EPA and FDA, unless no federal MCL exists.

\*\*\* Level Found - Average of representative samples from all locations.

‡ Where no federal MCL exists the MCLs shown are the California Health Services MCLs.

# Definitions & Statements Required by California Law

## Definitions

“statement of quality” – The standard (statement) of quality for bottled water is the highest level of a contaminant that is allowed in a container of bottled water, as established by the United States Food and Drug Administration (FDA) and the California Department of Public Health. The standards can be no less protective of public health than the standards for public drinking water, established by the U.S. Environmental Protection Agency (EPA) or the California Department of Public Health.

“maximum contaminant level (MCL)” - The highest level of a contaminant that is allowed in drinking water, established by the U.S. Environmental Protection Agency (EPA) or the California Department of Public Health. Primary MCLs are set as close to the PHGs as is economically and technologically feasible.

“public health goal (PHG)” - The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

“primary drinking water standard (PDWS)” - MCLs for contaminants established by the U.S. Environmental Protection Agency (EPA) or the California Department of Public Health that affect health along with their monitoring and reporting requirements, and water treatment requirements.

## Statements

This section of the bottled water report contains consumer information statements relative to drinking water as mandated by California Health & Safety Code Sector 111070 et. seq. These statements are immediately followed by the appropriate current contact information for the United States regulatory branch pertaining to the specified statements where applicable. Our product has been thoroughly tested in accordance with federal and California law. Our bottled water is a food product and can not be sold unless it meets the standards established by the U.S. Food and Drug Administration and the California Department of Public Health.

“Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the United States Food and Drug Administration, Food and Cosmetic Hotline (1-888-723-3366). ”

“Some persons may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons, including, but not limited to, persons with cancer who are undergoing Chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk from infections. These persons should seek advice about drinking water from their health care providers. The United States Environmental Protection Agency and the Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).”

“The sources of bottled water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water naturally travels over the surface of the land or through the ground, it can pick up naturally occurring substances as well as substances that are present due to animal and human activity.”

“Substances that may be present in the source water include any of the following:

1. Inorganic substances, including, but not limited to, salts and metals, that can be naturally occurring or result from farming, urban storm water runoff, industrial or domestic wastewater discharges, or oil and gas production.
2. Pesticides and herbicides that may come from a variety of sources, including, but not limited to, agriculture, urban storm water runoff, and residential uses.
3. Organic substances that are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
4. Microbial organisms that may come from wildlife, agricultural livestock operations, sewage treatment plants, and septic systems.
5. Substances with radioactive properties that can be naturally occurring or be the result of oil and gas production and mining activities.”

# Definitions & Statements Required by California Law



## Information on Contaminants

In order to ensure that bottled water is safe to drink, the United States Food and Drug Administration and the State Department of Public Health prescribe regulations that limit the amount of certain contaminants in water provided by bottled water companies. More information about contaminants can be obtained by calling the United States Food and Drug Administration, Food and Cosmetic Hotline at 1-888-723-3366.

## FDA Website for Product Recalls

If you would like to know whether a particular bottled water product has been or is being recalled, please visit the FDA's website at: <http://www.fda.gov/opacom/7alerts.html>.

