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Drinking Water Source Assessment and Protection (DWSAP) Program

A copy of the complete assessment may be viewed at Azusa Light & Water. To request a viewing of the DWSAP assessment contact Chet F. Anderson, P.E., Asst. Director-Water Operations (626) 812-5209.

Azusa Light & Water submitted DWSAP package on December 19,2002, using an electronic format approved by Department of Public Health. The assessments are summarized in the table below.

DRINKING WATER SOURCE ASSESSMENT AND PROTECTION (DWSAP) PROGRAM			
SOURCE NUMBER	SOURCE ID	MOST VULNERABLE ACTIVITIES (PCA)	CHEMICAL DETECTED
001	Well 1	Mining Operations-Historic	None
002	Well 2	Mining Operations-Historic	None
003	Well 3	Mining Operations-Historic	None
004	Well 4	Mining Operations-Historic	None
033	Well 11	Mining Operations-Historic	None
034	Well 12	Mining Operations-Historic	None
005	Well 5	Animal Feeding Operations as defined in federal regulation 2 Automobile-Gas Stations Dry Cleaners Historic Gas Stations Metal Plating/Finishing/Fabricating Mining Operations-Historic Plastics/Synthetics Producers Underground Storage Tanks-Confirmed Leaking Tanks Known Contaminant Plumes Sewer Collection Systems	None
006	Well 6		None
007	Well 7		None
008	Well 8		None
010	Well 10		Perchlorate, Nitrate, PCE

(PCA) Possible Contamination Activities



2011 Consumer Confidence Report

Azusa Light & Water is pleased to submit this report to you, our valued customer. This report is designed to inform you about the quality of water and services we deliver every day. Our commitment is to provide our customers with a safe and dependable supply of drinking water. Your water not only meets, but also surpasses both State and Federal standards for quality and safety. To maintain this high quality, State of California Department of Public Health certified plant operators are operating Azusa's Joseph F. Hsu Water Filtration Plant continuously 7 days per week, 365 days per year, treating and monitoring the quality of the drinking water we serve.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Este informe contiene informacion muy importante sobre su agua de beber. Traduzcalo o hable con alguien que lo entienda bien.

The Azusa Water System

The City of Azusa, a municipality incorporated December 29, 1898, maintains ownership and operation of the municipal utility referred to as Azusa Light & Water. Azusa Light & Water is entrusted with the responsibility for providing water utility service within its municipal boundaries, and, since acquiring the Azusa Valley Water Company in 1993, providing water utility service to portions of the communities surrounding the City of Azusa. The Azusa Water system serves the City of Azusa and portions of Covina, Glendora, Irwindale, West Covina and unincorporated Los Angeles County. Serving approximately 22,155 active service connections with an estimated population of 108,000, the combined and integrated water systems of the City of Azusa and the Azusa Valley Water Company comprise the largest municipal water utility in the San Gabriel Valley.

The Joseph F. Hsu Water Filtration Plant uses the latest filtration technology to filter 12 million gallons of water per day. Water is pressure fed through membranes in an outside-in pattern, and any particle larger than 0.04 microns is retained on the fiber surface. The Water Filtration Plant, the largest capital project in the history of the City of Azusa at \$36 million, has been designed to exceed the latest water quality requirements, enabling the City of Azusa to treat San Gabriel River water, imported water from the Colorado River, and water from the State Water Project. A reliable supply of high-quality water will be delivered to the customers of Azusa Light & Water for many years to come.

Sources of Supply

In general, typical sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. Water delivered to our customers in the Azusa Water system is a blend of water from the following water sources:

- ◆ San Gabriel River water treated at Joseph F. Hsu Water Filtration Plant
- ◆ Groundwater pumped from eight wells in the Canyon Basin
- ◆ Groundwater pumped from two wells in the Intermediate Basin
- ◆ Groundwater pumped from one well in the Main San Gabriel Basin
- ◆ Metropolitan Water District Treated Water Connection

Azusa produces its water in the upper reaches of the San Gabriel River, near the mouth of San Gabriel Canyon, far upstream of the contaminated groundwater zones found elsewhere in the San Gabriel Valley. Approximately 40% of the water served by the Azusa Water system is surface water diverted from San Gabriel Reservoir and treated at Azusa's Water Filtration Plant, 60% comes from Azusa's eleven groundwater wells, and less than 1% is supplied from Azusa's Metropolitan Water District treated surface water connection. The treated surface water is a blend of Colorado River and State Water Project water.

2011 WATER QUALITY TABLE

PRIMARY STANDARDS—Mandatory, Health-Related Standards Established by the State of California Department of Public Health									
PARAMETER	VIOLATION	UNIT	STATE	PHG (MCLG) [MRDL]	AZUSA		AZUSA		MAJOR SOURCES IN DRINKING WATER
			MAXIMUM CONTAMINANT LEVEL (MRDL)		GROUNDWATER RANGE	AVERAGE	SURFACE WATER RANGE	AVERAGE	
FILTRATION PERFORMANCE & MICROBIOLOGICAL									
Turbidity (a)	No	Units	0.10 (a)	N/A	N/A	N/A	0.02-0.10	0.04	Soil Runoff
Cryptosporidium	No	Oocysts/L	TT	N/A	N/A		0-0.3	0	Naturally present in the environment >99% of crypto is removed during treatment
MICROBIOLOGICAL									
Coliform Bacteria P/A (b)	No	% Positive	5%	(0)	0%	0%	0%	0%	Naturally present in the environment Human and Animal waste
DISINFECTANT, DISINFECTION BY PRODUCTS									
Chlorine Residual	No	mg/L	(4)	[4]	0.50-1.00	0.80	0.75-2.00	1.25	Drinking water disinfectant added for treatment
Total Trihalomethanes (b)	No	µg/L	80	N/A	4.7-26.0	8.7 (c)(d)	22.0-30.0	23.6(c)(d)	Byproduct of drinking water disinfection
Haloacetic Acids (b)	No	µg/L	60	N/A	2.5-7.0	4.9 (c)(d)	12.0-45.0	16.8(c)(d)	Byproduct of drinking water disinfection
ORGANIC CONTAMINANTS									
Tetrachloroethylene (PCE)	No	µg/L	5	0.06	ND-0.85	ND	ND	ND	Discharge from factories and dry cleaners
INORGANIC CONTAMINANTS									
Arsenic	No	µg/L	10	0.004	2.28-2.88	2.63	ND	ND	Erosion of natural deposits
Barium	No	µg/L	1000	2	ND-115	12.78	ND	ND	Erosion of natural deposits
Fluoride	No	mg/L	2	1	0.25-0.41	0.30	0.36	0.36	Erosion of natural deposits
Nitrate (as NO ₃)	No	mg/L	45	45	ND-4.6(d)	2.8 (d)	ND-2.0	ND (d)	Leaching from fertilizer use
Perchlorate	No	µg/L	6	6	ND (d)	ND (d)	ND	ND	Abnormal production of Thyroid Hormones
RADIOACTIVE CONTAMINANTS									
Gross Alpha Activity	No	pCi/L	15	(0)	ND-3.3	ND	0.28-0.84	0.56	Erosion of natural deposits
UNREGULATED CONTAMINANTS									
Boron	No	µg/L	NL-1000	N/A	ND-130	18.0	ND	ND	Reproductive effects on some men
Vanadium	No	µg/L	NL-50	N/A	ND-9.5	0.79	ND	ND	Child development effects

(a) Standard applies to surface water only. A separate standard applies to the distribution system. See secondary standards.

(b) Based on distribution system monitoring. (c) Four quarter average. (d) Blended value.

(MRDL) The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

CONTAMINANTS WITH SECONDARY STANDARDS—Aesthetic Standards Established by the State of California Department of Public Health							
PARAMETER	UNIT	STATE	AZUSA		AZUSA		MAJOR SOURCES IN DRINKING WATER
		MAXIMUM CONTAMINANT LEVEL	GROUNDWATER RANGE	AVERAGE	SURFACE WATER RANGE	AVERAGE	
Turbidity	Units	5	0.06-0.25	0.08	0.02-0.10	0.04	Soil Runoff
Color	Units	15	ND	ND	ND	ND	Naturally occurring organic materials
Odor Threshold	Units	3	1.0-1.0	1.0	1.0	1.0	Naturally occurring organic materials
Chloride	mg/L	500	12.0-48.0	29.4	4.5	4.5	Runoff/leaching from natural deposits
Sulfate	mg/L	500	17.0-52.0	30.4	19.0	19.0	Runoff/leaching from natural deposits
Total Dissolved Solids	mg/L	1000	190-440	250	230	230	Runoff/leaching from natural deposits
Specific Conductance	µmho/Cm	1600	330-660	400	380	380	Substances that form ions in the water

ADDITIONAL CONSTITUENTS ANALYZED							
PARAMETER	UNIT	STATE	AZUSA		AZUSA		MAJOR SOURCES IN DRINKING WATER
			GROUNDWATER RANGE	AVERAGE	SURFACE WATER RANGE	AVERAGE	
pH	Units	No Standard	7.40-8.20	7.80	7.90-8.40	8.10	
Hardness (CaCo ₃)	mg/L	No Standard	110-290	155	190	190	Runoff/leaching from natural deposits
Sodium	mg/L	No Standard	17-31	25.0	11.0	11.0	Runoff/leaching from natural deposits
Calcium	mg/L	No Standard	34-85	46.0	58.0	58.0	Runoff/leaching from natural deposits
Potassium	mg/L	No Standard	2.6-5.1	3.5	3.5	3.5	Runoff/leaching from natural deposits
Magnesium	mg/L	No Standard	5.0-19.0	10.0	13.0	13.0	Runoff/leaching from natural deposits

ABBREVIATIONS

<	Less than
ND	None Detected
NTU	Nephelometric Turbidity Unit(s)
µmho/Cm	micromhos per Centimeter
µg/L	micrograms per Liter (parts per billion)
mg/L	milligrams per Liter (parts per million)
pCi/L	pico Curies per Liter
NL	Notification Level
N/A	Not Applicable
TT	Treatment Technique

When you read about water quality, you might ask yourself:

How much is one part per billion (1ppb)?
 Answer: 1ppb equal to 1 drop of water in 14,000 gallons, 1 second in 32 years, 1 inch in 16,000 miles or 1 cent in \$10 million.

How much is one part per million (1ppm)?
 Answer: 1ppm is equal to 1 drop of water in 14 gallons, 1 second in 12 days, 1 inch in 16 miles or 1 cent in \$10,000.



In addition to the above constituents, we have conducted monitoring for 32 additional organic chemicals for which the California Department of Public Health and U.S. EPA have not yet set a standard and all results were below detection levels unless otherwise noted.

Our Water continues to be of superior quality and, we will, through proper planning and system protection, insure that our precious water resources continue to be safe from contamination.

For further information please contact Azusa Light & Water at (626) 812-5225 or visit our website at www.azusalw.com. For City Council information visit www.ci.azusa.ca.us

SAMPLING RESULTS SHOWING TREATMENT OF AZUSA'S SURFACE WATER SOURCES	
Treatment Technique*	Low-pressure membrane filtration system.
Turbidity Performance Standards** (that must be met through the water treatment process)	Turbidity of the combined filtered water must: 1. Be less than or equal to 0.10 NTU in 95% of measurements in a month. 2. Not exceed 0.5 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1	100%
Highest single turbidity measurement during the year	0.10
The number of violations of any surface water treatment requirements	0

* A required process intended to reduce the level of a contaminant in drinking water.

** Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

The Sources of Contamination

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. The presence of contaminants does not necessarily indicate that drinking water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline. (1-800-426-4791)

Nitrate

Nitrate in drinking water at levels above 45 ppm is considered a health risk for infants of less than six months of age. High nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. Well nitrate levels may rise for short periods of time due to rainfall or agricultural activity. Where higher nitrate levels are present, you should seek advice from your health care provider or choose to use bottled water for mixing formula and juice for your baby; if you are pregnant, you should drink bottled water. Water purveyors are required by State Health regulations to issue warnings to customers when drinking water nitrate levels exceed 45 ppm. Average nitrate levels sampled in the Azusa distribution system are: 2.8 ppm for groundwater and ND for surface water.

Total Trihalomethanes

Trihalomethanes (THM's) are a family of chemicals formed when a disinfectant such as chlorine is added to the water supply. Disinfection is an important and necessary step in the water treatment process that protects against harmful bacteria and other potential contamination. Chlorine is the most widely used and approved water system disinfectant in the United States.

The amount of total THMs allowed in drinking water is regulated by the EPA, which has set a total THM annual average safe limit of 80 parts per billion (ppb) in drinking water. Results of a health study released in early 1998 suggests that women who drink five glasses of water daily and are in the first three months of pregnancy may have an increased risk of miscarriage from THM levels in drinking water above 80 ppb. State officials have cautioned that the study is not definitive and have stated that more study on the issue is needed. Average THM's levels sampled in the Azusa distribution system are: 16.8 ppb for groundwater and 23.6 ppb for surface water.

Immuno-Compromised People

Some people may be more vulnerable to constituents in the water than the general population. Immuno-compromised people, such as those with cancer undergoing chemotherapy, persons with HIV/AIDS or other immune system disorders, some elderly persons, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection from microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

ADDITIONAL DATA CITY OF AZUSA LIGHT & WATER LEAD & COPPER TRIANNUAL (2011)							
PARAMETER INORGANIC CONTAMINANTS	UNITS OF MEASUREMENT	PHG or MCLG	MAJOR SOURCES IN DRINKING WATER	HEALTH EFFECTS LANGUAGE	MCL or AL	AZUSA DRINKING WATER CONCENTRATION	
						90th Percentile Value Distribution System	RANGE
Copper	µg/L	170	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.	1300 (AL)	830	ND-1600
Lead	µg/L	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.	15 (AL)	ND	ND-7.9

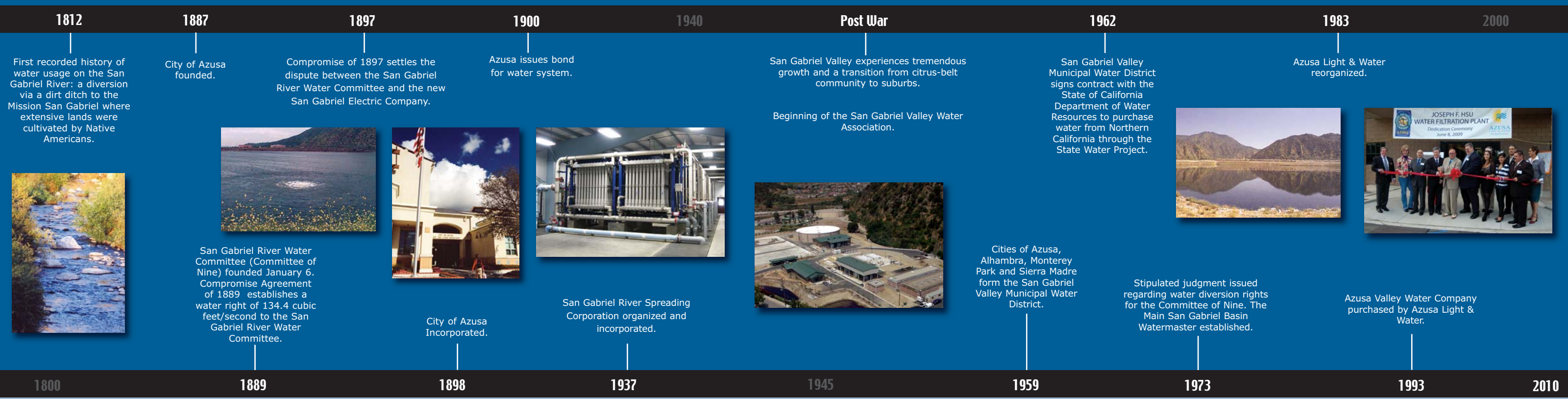
PHG = Public Health Goals
MCL = Maximum Contaminant Level
MCLG = Maximum Contaminant Level Goal

AL = Action Level
ND = Non-detectable

mg/L = parts per million
µg/L = parts per billion

50 Copper & Lead Samples Collected September 2005
2 Copper Samples exceeded the Action Level
2 Lead Samples exceeded the Action Level

For additional water quality data please contact water operations at (626) 334-0414.
For customer service please call (626) 812-5225.



Azusa Light & Water will continue to closely monitor future health studies and will continue working with state and federal water quality officials to maintain the high quality of our water and to safeguard the health of our customers.

Drinking Water Contaminants

Inorganic contaminants – Salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Microbial contaminants – Viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Organic chemical contaminants – Synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Pesticides and herbicides – Can come from a variety of sources such as agriculture, urban or stormwater runoff, and residential uses.

Radon – Can be naturally occurring or the result of oil and gas production and mining activities.

Perchlorate – Some people who drink water containing perchlorate in excess of the notification level may experience effects associated with hypothyroidism. Perchlorate interferes with the production of thyroid hormones, which are required for normal pre- and postnatal development in humans, as well as normal body metabolism.

Definitions

Notification Level & Action Level – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Cryptosporidium – A microscopic organism which, when ingested, can cause diarrhea, fever and other gastrointestinal symptoms. The organism comes from animal waste and may occur in surface watersheds. If detected, cryptosporidium is eliminated by an effective treatment combination including sedimentation, filtration and disinfection.

Maximum Contaminant Level Goal (MCLG) – The level of contaminant in drinking water below which there is no known or expected risk to health. Maximum contaminant level goals are set by the EPA.

Maximum Residual Disinfectant Level (MRDL) – The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. EPA.

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the public health goals and maximum contaminant level goals as is economically and technologically practicable.

Primary Drinking Water Standard – Primary maximum contaminant levels, specific treatment techniques adopted in lieu of primary MCLs, and monitoring and reporting requirements for MCLs that are specified in regulation.

Public Health Goals (PHG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. Public health goals are set by the California Environmental Protection Agency.

Radon – A radioactive gas found throughout the United States that can't be seen, tasted or smelled. It can move up into a building through the ground through cracks and holes in the foundation and can build up to high levels. Radon can get into indoor air when released from tap water from showering, washing dishes, and other household activities. Radon entering the home through tap water will, in most cases, be a small source in indoor air as compared to radon entering the home through soil. Radon is a known carcinogen and breathing air containing radon can lead to lung cancer. Drinking water containing radon may cause increased risk of stomach cancer. If you are concerned about radon, testing the air in your home is inexpensive and easy. For information call EPA's Radon Hotline (1-800-SOS-RADON).

Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

Turbidity – A measure of the cloudiness of the water. Turbidity is monitored because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfection.

Variance – State or EPA may give permission not to meet an MCL or a treatment technique under certain conditions.

Unregulated Contaminants

Boron – Some men who drink water containing boron in excess of the notification level over many years may experience reproductive effects, based on studies in laboratory animals.

Vanadium – The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.