



MEMORIAL VILLAGES WATER AUTHORITY
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2001 DRINKING WATER QUALITY REPORT

(Consumer Confidence Report)

January 2001 to December 2001

The United States Environmental Protection Agency (EPA) requires all drinking water suppliers in the country to provide a water quality report to their customers. This annual report concerns the quality of water provided by Memorial Villages Water Authority to the residents of Hedwig, Hunters Creek and Piney Point Villages. Questions concerning this report should be directed to our General Manager, Mr. Michael Montgomery, by calling 713-465-8318.

OUR DRINKING WATER MEETS OR EXCEEDS ALL FEDERAL (EPA) DRINKING WATER REQUIREMENTS.

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in this publication. We hope this information helps you become more knowledgeable about what's in your drinking water. When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. **All drinking water may contain contaminants.** 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791. **The following pages** list all of the federally regulated or monitored constituents which have been found in your drinking water. The U.S. E.P.A. requires water systems to test up to 97 constituents.

Secondary Constituents: Many constituents (such as calcium, sodium or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called *secondary constituents* and are regulated by the State of Texas, not EPA. These constituents are not causes for health concerns. Therefore, secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water. For information on these constituents, call the Water Authority at 713-465-8318.

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

Some people may be more vulnerable to contaminants in drinking water than the general population. **IMMUNO-COMPROMISED PERSONS** such as persons with cancer undergoing **CHEMOTHERAPY**, persons who have undergone **ORGAN TRANSPLANTS**, people with **HIV/AIDS** or other immune system disorders, some **ELDERLY**, and **INFANTS** can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline by calling 1-800-426-4791.

WHERE DOES YOUR DRINKING WATER COME FROM?

The source of your tap water comes from more than just one location. In 2001, the Water Authority provided over 82% of its treated drinking water from its five (5) water wells. These wells are all located within the Villages and produce water from the Evangeline Aquifer. This type of water source is commonly referred to as **groundwater**. The other source of our drinking water comes from the City of Houston. In August of 1998, the Water Authority began purchasing **blended water**, a combination of **surface water** and **groundwater**, from the City. **Surface water** comes from rivers, lakes, streams, ponds, reservoirs, and springs. The TNRCC will be reviewing all Texas' drinking water sources. The source water assessment process will be completed within 3 years. It is important to protect your drinking water by protecting your water source. Although the water purchased from the City represented less than 17.5% of the total water delivered by the Water Authority in 2001, this amount will increase every year. The Harris-Galveston Coastal Subsidence District requires the Water Authority to convert to **surface water**.

SOURCES OF DRINKING WATER

The sources of drinking water (both tap water and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs and wells. 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 contaminants resulting from the presence of animal or human activity.

Contaminants that may be present in source water:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from agriculture, urban storm water runoff, and residential uses.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants, including synthetic and volatile organic chemicals which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

WHAT YOU NEED TO KNOW TO BETTER UNDERSTAND WHAT IS IN YOUR WATER

Definitions:

Maximum Contaminant Level (MCL): The highest permissible level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

pCi/l = Pico curies per liter (a measure of radioactivity); **NTU** = Nephelometric turbidity units; **ppm** = parts per million or milligrams per liter (mg/l); **ppb** = parts per billion, or micrograms per liter (ug/l); **ppt** = parts per trillion, or nanograms per liter; **ppq** = parts per quadrillion, or picograms per liter; **MFL** = million fibers per liter (a measure of asbestos); **ND** = Not Detected

TABLE I = Information on the *groundwater* supplied by the Water Authority as part of its drinking water supply.

TABLE II = Information on the *blended water* supplied by the City of Houston to the Water Authority as part of its drinking water supply.

TABLE I - Memorial Villages Water Authority's Groundwater—System I.D. No. 1010146
2001* CONTAMINANTS DETECTED IN YOUR DRINKING WATER; NONE WERE ABOVE THE MCL

INORGANICS

Year	Constituent	Highest Level of any sample	Range of Detection	MCL	MCLG	Unit of Measure	Source of Constituent
1999	Arsenic	6.4	3.5000—6.4000	50	0	ppb	Erosion of natural deposits; Runoff from orchards, glass and electronics production
1999	Barium	0.222	0.1350—0.2220	2	2	ppm	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
1999)	Fluoride	0.8	0.3000—0.8000	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
1999)	Nitrate	0.81	0.0800—0.8100	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
1999)	Nitrite	0.01	0.0000—0.0100	1	1	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
1999)	Selenium	4.4	0.0000—4.4000	50	50	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
1999	Gross beta adjusted	3.3	3.3000—3.3000	15	0	pCi/l	Erosion of natural and manmade deposits.

ORGANICS

NOT TESTED FOR OR NOT DETECTED

Disinfection By-Products (THM)

Year	Constituent	Avg. of all Sampling Points	Range of Detected levels	MCL	MCLG	Unit of Measure	Source of Constituent
2000	Total Trihalomethanes	6.9	6.90—6.90	100	0	ppb	By-products of drinking water chlorination

UNREGULATED CONTAMINANTS

Year	Constituent	Avg. of all Sampling Points	Range of Detected Levels	Reason for Monitoring
1999	Chloroform	1.0333	0.0000—3.1000	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
1999	Bromoform	2.8	0.5000—7.3000	
1999)	Bromodichloromethane	1.7667	0.0000—5.3000	
1999	Chlorodibromomethane	4.2667	0.8000—11.0000	

LEAD and COPPER

Year	Constituent	The 90th Percentile	No. of Sites Exceeding AL	Action Level	Unit of Measure	Source of Constituent
1998)	Copper	0.1180	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
1998)	Lead	19.8	5	15	ppb	Corrosion of household plumbing system; Erosion of natural deposits.

COLIFORM BACTERIA—What are coliforms? Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption. Fecal coliform bacteria and, in particular, E-coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria in drinking water may indicate recent contamination of the drinking water with fecal material. The following table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your supplier last year.

TOTAL COLIFORM

Year	Constituent	Highest Monthly No. of Positive Samples	MCL	Unit of Measure	Source of Constituent
2001	Total Coliform Bacteria	1	*	Presence	Naturally present in the environment

* Two or more coliform found samples in any single month

Fecal Coliform Bacteria—NOT DETECTED

TABLE II - City of Houston blended water supplied to the Water Authority - Houston's entry point 004, Afton Village 2001* CONTAMINANTS DETECTED IN YOUR DRINKING WATER; NONE WERE ABOVE THE MCL

INORGANICS

Year	Constituent	Highest Level of any sample	Range of Detection	MCL	MCLG	Unit of Measure	Source of Constituent
1999	Arsenic	4.3	4.3—4.3	10	0	ppb	Erosion of natural deposits; Runoff from orchards, glass and electronics production.
1999	Barium	0.203	0.2030—0.2030	2	2	ppm	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
1999	Fluoride	0.3	0.3000—0.3000	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
1999	Gross beta emitters	<4.0	4.0000—4.0000	50	0	pci/l	Decay of natural and manmade deposits.
1999	Total Nitrate	<0.26	0.26—0.26	10	10	ppm	Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks and sewage.
1999	Alpha emitters	<2.00	2.00—2.00	15	0	pci/l	Erosion of natural deposits.

ORGANICS NOT TESTED FOR OR NOT DETECTED

THM

Year	Constituent	Highest level of Sampling Point	Range of Detected levels	MCL	MCLG	Unit of Measure	Source of Constituent
1998	Total Trihalomethanes	2.9	2.90—2.90	100	0	ppb	By-products of drinking water chlorination

UNREGULATED CONTAMINANTS

Year	Constituent	Highest level of Sampling Point	Range of Detected Levels	Reason for Monitoring
1999	Chloroform	<0.5	0.5000— 0.5000	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
1999	Bromoform	<0.5	0.5000— 0.5000	
1999	Bromodichloromethane	<0.5	0.5000— 0.5000	
1999	Dibromochloromethane	<0.5	0.5000— 0.5000	

LEAD and COPPER

Year	Constituent	The 90th Percentile	No. of Sites Exceeding Action Level	Action Level (AL)	Unit of Measure	Source of Constituent
1999	Copper	0.146	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
1999	Lead	0.0052	0	15	ppb	Corrosion of household plumbing system; Erosion of natural deposits.

*Or latest information available.

LEAD in Drinking Water: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that the lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your kitchen tap for 30 seconds before using the tap water. Additional information is available from the Safe Drinking Water Hotline at (1-800-426-4791) or by logging on to EPA's web site on drinking water at: (www.epa.gov/safewater/)

PUBLIC PARTICIPATION OPPORTUNITIES FOR MEMORIAL VILLAGES WATER AUTHORITY

BOARD MEETINGS:

1ST Tuesday of the month

LOCATION:

8955 Gaylord Drive, Houston, 77024

TIME:

7:00 p.m.

FOR INFORMATION CALL:

713-465-8318

VISIT OUR WEB SITE AT: WWW.MVWA.ORG

ARSENIC: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

NITRATE: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. If you are caring for an infant, ask for advice from your health care provider.

The Water Authority conducts more tests on its drinking water than is required by either the TNRCC or the EPA and obtains regular water quality reports from the City on the water they provide to us. In 2001, the City of Houston's drinking water met or exceeded all State and Federal requirements. Over the past 3 years, we have spent more than 3.5 million dollars on our water supply system. These expenditures have included the installation of surface water transmission lines, replacement and upgrading of old water lines, the addition of new fire hydrants and, upgrading components for improved reliability. The Board and employees of the Water Authority take very seriously the trust you have placed in us to insure that your water is safe.

THE WATER AUTHORITY IS COMMITTED TO PROTECTING YOUR DRINKING WATER