TRUCKEE MEADOWS WATER AUTHORITY www.tmwa.com

2012 WATER QUALITY REPORT

DATA COLLECTED FOR CALENDAR YEAR 2011

Your Water Quality is Our Number One Priority

Truckee Meadows Water Authority (TMWA) is committed to delivering high-quality water to more than 330,000 residents and businesses throughout the Reno and Sparks area. On behalf of TMWA's staff and Board of Directors, I am pleased to provide you with our annual Water Quality Report. In accordance with the U.S. Environmental Protection Agency (EPA) Consumer Confidence Rule, this information is provided to inform our customers about the source of their drinking water and how it compares to drinking water standards established by the EPA.

Every year during the first week in May, we celebrate Drinking Water Week by recognizing the vital role water plays in all of our lives. We are proud to celebrate our drinking water and Drinking Water Week, by hosting the following workshop next month:

Drinking Water Week: Know What's in Your Drinking Water
At TMWA, 1355 Capital Blvd., Reno, NV
Thursday, May 10 at 5:30 p.m.

I hope you'll join our water quality experts for this interesting workshop and question and answer session, where they will talk about their favorite subject, your water.

We take a lot of pride in the water we deliver to the community. It is the same water that we enjoy and the water that our families drink. As your locally owned and operated water purveyor we encourage you to contact us regarding any aspect of your water service, your water quality or any other questions you may have. We are always happy to answer your inquiries and explain all the information available on water quality. Please call our Water Quality Department at 834-8118, or visit us at www.tmwa.com for a complete list of TMWA departments. Overseeing and maintaining our water quality for the safety of the public is our number one priority every day.

Yours in good health,

Mark Foree

General Manager

TRUCKEE MEADOWS WATER AUTHORITY

Quality. Delivered.

It starts with a great source of water and a great team

In the Truckee Meadows we are fortunate to have Lake Tahoe (known for its clarity and quality) and the Truckee River system as our primary source of drinking water. However, no matter how clear and pure a water source is, it still takes highly skilled and trained scientists, engineers and operators to supply, treat and deliver high-quality drinking water to customers. TMWA has two surface water treatment facilities, the Chalk Bluff and Glendale plants, where we treat water for our community's 330,000 residents 365 days a year. During a non-drought year TMWA only uses four percent of the total flow of the Truckee River to meet our customers' needs. Truckee River water meets more than 90 percent of TMWA's annual customer demands while groundwater, which comes from more than 30 wells located within our service area, is utilized to meet the remaining demands.

What regulations does TMWA water meet?

TMWA adheres to all federal, state and local water regulations set forth by the EPA, State of Nevada Division of Environmental Protection and the Washoe County District Health Department. TMWA is required to monitor and meet regulatory standards for more than 100 contaminants. All water delivered to customers is treated and must adhere to some of the strictest drinking water regulations in the world.

Truckee Meadows Water Authority (TMWA) is a not-for-profit, community-owned water utility, overseen by elected officials and citizen appointees from Reno, Sparks and Washoe County.

TEST RESULTS: 2011 WATER QUALITY DATA

The table below lists all of the drinking water contaminants that we detected during the 2011 calendar year of this report. The presence of contaminants in the water does not necessarily indicate the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

CONTAMINANTS	MCLG or MRDLG	MCL, TT or MRDL	2011 Result	System Weighted Average	Range Low	Range High	Violation	Typical Source
Disinfectants & Disinfection By-Products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Chlorine (as Cl_2) (ppm)	4	4	0.73	0.73	0.2	1.2	No	Water additive used to control microbes.
Haloacetic Acids (HAA_5) (ppb)	NA	60	30.4	30.4	5.6	48.7	No	By-product of drinking water chlorination.
TTHMs [Total Trihalomethanes] (ppb)	NA	80	30.9	30.9	9.2	48.1	No	By-product of drinking water disinfection.
Inorganic Contaminants								
Antimony (ppb)	6	6	2.37	0.051	ND	5.57	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Arsenic (ppb)	0	10	6.57	0.001	ND	15.2	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm)	2	2	0.098	0.032	ND	0.098	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium (ppb)	100	100	15	1.2	ND	15	No	Discharge from steel and pulp mills; Erosion of natural deposits.
Nitrate [measured as Nitrogen] (ppb)	10	10	7.04	0.15	ND	7.04	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Microbiological Contaminants								
Total Coliform (% positive samples/month)	0	5	0	0	0	0	No	Naturally present in the environment.
Turbidity (NTU)	100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.084 NTU. Any measurement in excess of 1 is a violation unless otherwise approved by the state. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.						No	Soil runoff.
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	5.6	0.29	ND	5.6	No	Erosion of natural deposits.
Beta/photon emitters (pCi/L)	0	50	5.1	0.31	ND	5.1	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/L to be the level of concern for Beta particles.
Radium (combined 226/228) (pCi/L)	0	5	2.183	0.012	ND	2.183	No	Erosion of natural deposits.
Uranium (ug/L)	0	30	7.8	0.4	ND	7.8	No	Erosion of natural deposits.
Volatile Organic Contaminants								
Tetrachloroethylene (ppb)	0	5	1.00	0.0009	ND	1.00	No	Discharge from factories and dry cleaners.
Trichloroethylene (ppb)	0	5	1.02	0.0023	ND	1.02	No	Discharge from metal degreasing sites and other factories.

CONTAMINANTS	MCLG	AL	2011 Result	# Samples Exceeding AL	Sample Date	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.1	0	2011	No	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead - action level at consumer taps (ppb)	0	15	1.96	0	2011	No	Corrosion of household plumbing systems; Erosion of natural deposits.

UNIT DESCRIPTIONS			
Term	Definition	Term	Definition
ug/L	Number of micrograms of substance in one liter of water	% positive samples/month	Percent of samples taken monthly that were positive
ppm	Parts per million, or milligrams per liter (mg/L)	NA	Not applicable
ppb	Parts per billion, or micrograms per liter (µg/L)	ND	Not detected
pCi/L	Picocuries per liter (a measure of radioactivity)	NR	Monitoring not required, but recommended

IMPORTANT DRINKING WATER DEFINITIONS	
Term	Definition
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
NTU	Nephelometric Turbidity Units: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Notes: SYSTEM WEIGHTED AVERAGE: The 2012 Water Quality Report is mandated by the EPA to give our consumers the HIGHEST recorded value of any constituent detected from all sources in 2011. However, most groundwater wells, in which most of our reported constituents were detected, are only used when system demands are at their peak during the summer months. In 2011, these wells made up less than 10 percent of the water that TMWA customers consumed. The "system weighted average" value is based on the percentage of total production and highest compliance value recorded for the year. In this way, we not only report the highest value detected in our system for any constituent, but we also give you an idea of how little that groundwater is used when compared with the total water produced from our two surface water plants. This report will also allow us to give you a more meaningful representation of the water you receive, not just a highest detected value for a well that may only operate one day a week.

PCE/ARSENIC/THM/HAA/ANTIMONY: Compliance for these constituents is determined by calculating the running annual average. Sampling is conducted either on a daily basis or a quarterly basis at designated locations. A corresponding quarterly average is determined from these samples and the running annual average is calculated by using the four most recent quarterly averages. A single sample may show that an individual elevated result is over the MCL but the compliance value remains below the MCL. All water meets all local, state and federal standards and your water is safe to drink.

HEALTH INFORMATION ABOUT WATER QUALITY

RESULTS OF *CRYPTOSPORIDIUM* MONITORING

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing a life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

TMWA routinely monitors our source water and finished water for *Cryptosporidium*. No *Cryptosporidium* oocysts were detected in the finished water sampled from the Chalk Bluff and Glendale Water Treatment Facilities.

ADDITIONAL INFORMATION FOR 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.

ADDITIONAL WATER QUALITY INFORMATION

Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by-products. These by-products include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Some people who drink water containing trichloroethylene and tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

WATER TREATMENT PLANT FILTER LOADING RATE

After satisfactory demonstration, TMWA has been granted approval by the State of Nevada Bureau of Safe Drinking Water to operate the Glendale Water Treatment Plant at the accelerated filter loading rate up to 7.5 gallons per minute (gpm)/square foot and the Chalk Bluff Water Treatment Plant up to 8.5 gpm/square foot under the conditions that while operating at the accelerated filter loading rate: no individual filter at either plant may exceed 0.2 NTU and the Chalk Bluff combined filter turbidity may not exceed 0.2 NTU.

Treatment process focuses on health

The water delivered to your tap meets all EPA and State of Nevada drinking water health standards. It undergoes a multi-stage treatment process and is rigorously tested daily. Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, people 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 from their health care providers about their drinking water.

The EPA/CDC has guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants. More information about these and other contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline at (800) 426-4791. We test for Cryptosporidium weekly in both our source water and treated water. Cryptosporidium can be present in the Truckee River, but has not been found in the treated water that goes to your tap.

Why are there contaminants in my drinking water?

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 EPA's Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) include 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 substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- 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 a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. In addition, the Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Required Consumer Confidence Report (CCR) statement addressing lead in drinking water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. TMWA is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Source Water Assessment and its availability

The Federal Safe Drinking Water Act was amended in 1996 and requires states to develop and implement source water assessment programs to analyze existing and potential threats to the quality of public drinking water throughout the state. A summary of TMWA's susceptibility to potential sources of contamination was initially provided by the State of Nevada in 2003. The summary of this source water assessment was first included in the TMWA 2004 Water Quality Report and may now be accessed online at www.tmwa.com.

Information pertaining to the initial findings of the source water assessment is available for viewing in person at the offices of the Bureau of Safe Drinking Water, 901 South Stewart St., Ste. 4001, Carson City, NV 89701. Appointments are suggested; please call 687-9520. Office hours are 8 a.m. to 5 p.m., Monday through Friday.

Where can I get water quality data?

The Water Quality section of our Web site (www.tmwa.com) provides water quality information for different areas of our service territory. We also maintain a news and information page with fact sheets on water quality issues, as well as information on home water filtration systems. Additional information on our water sources, distribution and treatment can also be found online. If you have additional questions, or need more information, please contact any of the following staff:

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