2014 Report to Consumers on

WATER QUALITY Consumer Confidence Report

Our Goal: Meet or Exceed Federal & State Regulations

The City of Morgan Hill is committed to providing the community a safe, reliable supply of excellent quality drinking water that meets or exceeds Federal and State regulations. Again in 2014, we met or exceeded every water quality standard without a single violation.

This report gives information about the quality of water provided in 2014. It describes where your water comes from, what it contains and how it compares to State standards.

Share This Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their locations who are not billed customers of the City of Morgan Hill and therefore do not receive this report directly.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

A Word About Chemicals and Organisms

Here is a brief description of chemicals and organisms, and how the City of Morgan Hill monitors, tests, and treats for them:

Lead and Copper Testing

In 1991, the United States Environmental Protection Agency (USEPA) adopted the Lead and Copper Rule which requires all cities, including Morgan Hill, to perform lead and copper testing. The City's public water system does not have detectable levels of lead and copper; however, these metals may leach into the water from home plumbing.

In June 1997, the City completed lead and copper testing from inside homes under the guidance of the State Water Resource Control Board (SWRCB). Results showed that the copper levels were below the Federal Action Level of 1.3 parts per million (ppm), and the lead levels were below the Federal Action Level of 15 parts per billion (ppb).

The City is on a three-year cycle for testing of lead and copper determined by the primary testing performed at the inception of the lead and copper Rule.

The City has completed its 2012 tri-annual round of sampling and the sample results remain under Federal Action Levels for lead and copper. We will retest these levels again in 2015.

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. The City 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 2 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 **http://water.epa.gov/drink/info/lead**

Nitrates

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such 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. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or if you are pregnant, you should ask advice from your health care provider.

The City's water supply is below the maximum contaminant level (MCL) for nitrates. In 2014, the City performed 19 nitrate analyses alone to ensure a safe water supply.

Unregulated Contaminants

The City monitors for unregulated contaminants as required by USEPA. This helps the USEPA and SWRCB determine where certain contaminants occur, and whether the contaminants need to be regulated.

Water Sources

Morgan Hill is located in South Santa Clara County, situated between the Coyote and Llagas underground aquifers. These aquifers are the source of Morgan Hill's water supply.

The City currently operates 15 active and 2 standby groundwater wells throughout the City. In 2014, these wells supplied 2,442 million gallons of water to approximately 13,608 active residential and business accounts. The water produced by these wells is disinfected with sodium hypochlorite to protect against microbial contaminants.

An assessment of the drinking water sources for the City of Morgan Hill was completed in September 1998. The groundwater source is considered to be most vulnerable to the following activities associated with contaminants detected in groundwater: low density septic systems, irrigated crops, grazing and animal operations, agricultural/irrigation wells and animal feeding operations (occurrence of nitrate in groundwater).

A copy of the complete assessment is available at the State Water Resource Control Board, Drinking Water Field Operations Branch at 850 Marina Bay Parkway, Bldg. P, 2nd Floor, Room 458, Richmond, California, and the City of Morgan Hill Utilities Division at 100 Edes Court.

Water Quality Data

The table on page 4 of this report on the following page lists all the SWRCB regulated drinking water contaminants detected during the test cycle up to December 31, 2014.

To ensure that tap water is safe to drink, SWRCB prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Morgan Hill's water is treated in accordance with SWRCB regulations.

The SWRCB Food and Drug Branch regulations establish limits for contaminants in bottled water; these limits provide the same protection for the public water supply. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk.

Unless otherwise noted, the data presented in this table is from testing done over the period January 1 - December 31, 2014. The State allows the City to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Thus, some of the data – though representative of the water quality – is more than a year old.

Water Sampling and Testing

The water sampling required by SWRCB consists of weekly Bacteria (520), Quarterly Nitrate (4), Quarterly Trihalomethanes (16), Quarterly Haloacetic Acids (16), Annual Nitrate (15), Triannual Inorganic Chemicals (116), Triannual Radiological (5), Triannual Synthetic Organic Chemicals (358), Triannual Volatile Organic Chemicals (204), Triannual General Physical (105), for a total of 1,359 required samples from 30 separate sample stations and the 15 active source wells located throughout the City's water production and distribution system.

Other Information

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 USEPA's Safe Drinking Water Hotline (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 health care providers. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.

TERMS & ABBREVIATIONS USED IN THE DATA TABLES

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.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level (MRDL): 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.

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

- **n/a**: not applicable
- **ns**: no standard
- **nd**: not detectable at testing limit
- **cu**: color unit (a measure of color in water)
- **ppb**: parts per billion or micrograms per liter
- **ug/L**: micrograms per liter
- **ppm**: parts per million or milligrams per liter
- **mg/L**: milligrams per liter
- **pCi/l**: picocuries per liter (a measure of radiation)
- **MFL**: Million Fibers per Liter, with a fiber length greater than 10 micrometers
- **grains per gallon**: the measure of the concentration of a solution
- **TON**: Threshold Odor Number (a measure of the odor associated with water)
- **umhos/cm**: the measure of the dissolved inorganic salt content
- **<**: less than
- **DLR**: Detection limit for purposes of reporting.

Contaminants that may be present in source water before we treat it.

- **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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, and mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agricultural and residential uses.
- **Radioactive contaminants**, which are naturally occurring.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroction, and can also come from gas stations, urban runoff and septic systems.

Water Quality Statement

For the calendar year 2014, your tap water met all U.S. Environmental Protection Agency (USEPA) and State drinking water health standards. The City of Morgan Hill vigilantly safeguards your water supply and once again we are proud to report that the City's system is in full compliance with all State Water Resource Control Board.

MICROBIOLOGICAL CONTAMINENTS

MICROBIOLOGICAL CONTAMINENT	HIGHEST MONTHLY % OF POSITIVE SAMPLES	NO.OF MONTHS IN VIOLATION	MCL	MCLG	TYPICAL SOURCE OF CONTAMINATION	ACTION LEVEL EXCEEDED?
TOTAL COLIFORM BACTERIA	0.0%	0	MORE THAN 5.0% OF MONTHLY SAMPLES ARE POSITIVE	0	NATURALLY PRESENT IN THE ENVIRONMENT	NO

LEAD AND COPPER RULE

PARAMETER	DATE TESTED	UNITS	ACTION LEVEL	PHG (MCLG)	NUMBER OF SITES SAMPLED	HOUSEHOLD RESULTS 90th PERCENTILE	TYPICAL SOURCE OF CONTAMINATION	ACTION LEVEL EXCEEDED?
LEAD	Sep 2012	ppb	15	0.2	30	5	INTERNAL CORROSION OF HOUSEHOLD PLUMBING SYSTEMS; EROSION OF NATURAL DEPOSITS; LEACHING FROM WOOD PRESERVATIVES	NO
COPPER	Sep 2012	ppm	1.3	0.3	30	0.5	INTERNAL CORROSION OF HOUSEHOLD PLUMBING SYSTEMS; EROSION OF NATURAL DEPOSITS; LEACHING FROM WOOD PRESERVATIVES	NO

SAMPLING RESULTS FOR SODIUM AND HARDNESS

PARAMETER	DATE TESTED	UNITS	MCL	PHG (MCLG) [MRDLG]	GROUNDWATER		RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANT	EXCEEDED MCL?
					LOW	HIGH	AVG.		
SODIUM	2014	ppm	NS	N/A	28	34	31	"SODIUM" REFERS TO THE SALT PRESENT IN THE WATER AND IS GENERALLY NATURALLY-OCCURRING	NS
HARDNESS	2014	ppm	NS		213	257	235	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NS
HARDNESS	2014	GRAINS/GAL	NS		12	15	14	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NS

PRIMARY DRINKING WATER STANDARDS - MANDATORY HEALTH RELATED STANDARDS

PARAMETER	DATE TESTED	UNITS	DLR	MCL	PHG (MCLG) [MRDLG]	GROUNDWATER		RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANT	EXCEEDED MCL?
						LOW	HIGH	AVG.		
INORGANIC CHEMICALS										
BARIUM	2014	ppm	0.1	1	2	0.06	0.18	0.10	DISCHARGES OF OIL DRILLING WASTES AND FROM METAL REFINERIES; EROSION OF NATURAL DEPOSITS	NO
Chromium Total	2014	ppb	10	50	100	4	12	7.6	DISCHARGES FROM STEEL AND PULP MILLS AND CHROME PLATING; EROSION OF NATURAL DEPOSITS	NO
FLUORIDE (NATURALLY OCCURING)	2014	ppm	0.1	2	1	0.1	0.2	0.12	EROSION OF NATURAL DEPOSITS; WATER ADDITIVE THAT PROMOTES STRONG TEETH; DISCHARGE FROM FERTILIZER AND ALUMINUM FACTORIES	NO
NITRATE (as NO3)	2014	ppm	2	45	45	7	30	18.0	RUNOFF AND LEACHING FROM FERTILIZER USE; LEACHING FROM SEPTIC TANKS AND SEWAGE; EROSION OF NATURAL DEPOSITS	NO
NITRATE + NITRITE (AS N)	2014	ppb	400	10000	10000	3000	5200	4080	RUNOFF AND LEACHING FROM FERTILIZER USE; LEACHING FROM SEPTIC TANKS AND SEWAGE; EROSION OF NATURAL DEPOSITS	NO

PARAMETER	DATE TESTED	UNITS	MCL	PHG (MCLG) [MRDL]	GROUNDWATER		RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANT	EXCEEDED MCL?
					LOW	HIGH	AVG.		
TOTAL TRIHALOMETHANES (TTHM)	2014	ppb	80	N/A	0.61	7.9	3.57	BY-PRODUCT OF DRINKING WATER CHLORINATION	NO
HALOACETIC ACIDS (HAA5)	2014	ppb	60	N/A	0	0	0.00	BY-PRODUCT OF DRINKING WATER DISINFECTION	NO
CHLORINE RESIDUAL (as CL2)	2014	ppm	4.0	[4.0]	0.15	0.6	0.37	DRINKING WATER DISINFECTANT ADDED FOR TREATMENT	ND

SECONDARY DRINKING WATER STANDARDS - AESTHETICS STANDARDS

PARAMETER	DATE TESTED	UNITS	MCL	PHG (MCLG) [MRDLG]	GROUNDWATER		RANGE OF DETECTION	TYPICAL SOURCE OF CONTAMINANT	EXCEEDED MCL?
					LOW	HIGH	AVG.		
CHLORIDE	2014	mg/L	500	N/A	45	66	56	RUNOFF/LEACHING FROM NATURAL DEPOSITS; SEAWATER INFLUENCE	NO
SULFATE	2014	mg/L	500	N/A	33	42	35.8	RUNOFF/LEACHING FROM NATURAL DEPOSITS; INDUSTRIAL WASTES	NO
TOTAL DISSOLVED SOLIDS	2014	mg/L	1000	N/A	308	390	340	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NO
SPECIFIC CONDUCTANCE (E.C.)	2014	umho/cm	1,600	N/A	534	628	592	SUBSTANCES THAT FORM IONS WHEN IN WATER; SEA WATER INFLUENCES	NO
COLOR	2014	unit	15	N/A	0	0	0	NATURALLY-OCCURING ORGANIC MATERIALS	NO
ODOR-THRESHOLD	2014	TON	3	N/A	1	2	1.25		NO
LIST OF ADDITIONAL CONSTITUENTS ANALYZED									
pH	2014	unit	NS	6.5-8.5	7.4	7.6	7.5	PH IS AN EXPRESSION OF THE INTENSITY OF THE BASIC OR ACIDIC CONDITION OF A LIQUID	NS

UNREGULATED CONTAMINATE MONITORING RULE 3

PARAMETER	DATE TESTED	UNITS	NOTIFICATION LEVEL	PHG (MCLG)	GROUNDWATER		RANGE OF DETECTION
					LOW	HIGH	AVG.
Chlorate	2014	ug/L	800 ug/L	NS	0	150	57.5
Chromium	2014	ug/L	N/A	NS	0.91	3.7	2.32
Hexavalent Chromium	2014	ug/L	N/A	NS	0.78	3.5	2.1
Molybdenum	2014	ug/L	N/A		0	1.1	0.2
Strontium	2014	ug/L	N/A		170	590	444
Vanadium	2014	ug/L	50ug/L		1	6.3	2.2

City of Morgan Hill
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POSTAL CUSTOMER
MORGAN HILL, CA

Water System Improvements

The City's water system consists of 15 production wells, 155 miles of water main, nine pumping stations, and 12 reservoirs. This complex, interrelated system requires 24-hour monitoring and an extensive program of ongoing maintenance. Additionally, a five-year program of capital improvements must be constantly updated to plan and fund new capacity and the replacement of aging infrastructure. During the past year, the following water system improvements were completed:

- Rehabilitation:
  BoysRanch 3A Well, and Jackson Well, East Dunne Booster Station CLA - Valves, and Llagas Tank Rehabilitation.
- Water Main Replacement Project:
  Main Ave Phase 2

Don't Be a Water Waster

- Adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.
- Run your clothes washer and dishwasher only when full. You can save up to 1,000 gallons a month.
- Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.
- Water your lawn and garden in the morning or evening when temperatures are cooler.
- Use a broom instead of a hose to clean your driveway and sidewalk and save water every time.
- If water runs off your lawn easily, split your watering time into shorter periods for better absorption.
- Shorten your shower by a minute or two and you'll save up to 150 gallons per month.

These great ideas and more can be found at **wateruseitwisely.com/100-ways-to-conserve**