City of Corning

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June 10, 2010
City of Corning
Department of Public Works
Water Quality Consumer Confidence Report
For Calendar Year 2009
Public Water System Number 5210001

This report states the chemical analysis of our drinking water and the progress accomplished in modernizing our Drinking Water Distribution System. The City of Corning diligently strives towards operation of one of the finest state of the art Drinking Water Distribution Systems in the North State through continual improvements and upgrades.

How to reach us with questions and concerns: For more information regarding your drinking water or this report, contact Dawn Grine at 530/824-7029. Opportunities for public participation in decisions that affect drinking water quality may be conducted at the Regularly Scheduled City Council Meetings held every second and fourth Tuesday of each month, please contact the City Clerk at 530/824-7033 for more information **Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.**

City Well locations:
City water originates from seven (7) well locations consisting of deep well turbine pumps pumping ground water from the deep-water aquifer located beneath the City. Three additional well sites are currently off-line and not supplying water into the City system.

The City has completed upgrading all seven (7) well sites by adding Variable Frequency Drive Systems that computer control and operate the pumps on a preset pressure setting. A computerized control panel remotely monitors and controls the functions of the water storage tower and these seven well sites. An auto dialer system can dial the Fire Department 24 hours a day reporting any system failures, which are then reported to the Public Works Department. Other improvements include installation of four (4) diesel powered standby generators to operate automatically and within minutes of a power failure. One of the wells can be operated by a standby gear drive system that has a diesel-powered engine. This system can be initiated within one-half hour of a power failure. For security purposes, motion sensitive alarm systems have been installed at City Wells.

The City is currently requesting funding for a new well site located within the City Limits.

California Department Public Health completed a Drinking Water Source Assessment Program (DWSAP) in March of 2002 on seven (7) of the City wells, a copy can be obtained at City Hall or question can be direct to the California Department of Public Health 530/224-4800, and the results are as follows:

Source Name	Vulnerability Summary
Well 001	Well 001 is considered to be most vulnerable to contamination from the agricultural/irrigation wells located in the general vicinity around the well.
Well 002	Well 002 is considered to be most vulnerable to contamination from nearby airport activities, historic waste dumps and landfills, metal plating, finishing, or fabricating, and septic tank/leach field systems located in the general vicinity around the well.
Well 003	Well 003 is considered to be most vulnerable to contamination from the historic gas stations and metal plating, finishing, and fabricating facilities located in the general vicinity around the well.
Well 005	Well 005 is considered to be most vulnerable to contamination from the historic gas stations and metal plating, finishing, and fabricating facilities located in the general vicinity around the well.
Well 008	Well 008 is considered to be most vulnerable to contamination from injection wells or dry wells located in the general vicinity around the well.
Well 009	Well 009 is considered to be most vulnerable to contamination from the grazing activities located in the general vicinity around the well.
Well 010	Well 010 is considered to be most vulnerable to contamination from the high-density septic tank and leach field disposal systems in the vicinity around the well.

Definitions of some of the terms used in this report:
Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. The California Environmental Protection Agency sets PHGs.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. The Federal Environmental Protection Agency (USEPA) sets the standards for MCLGs.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is technologically and economically 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.
Maximum Residual Disinfectant Level Goal (MRDLG): 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.
Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and surface water treatment requirements.
Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ppb: Parts per billion or micrograms per liter
ppm: Parts per million or milligrams per liter
nd: Non detectable at testing limit
ppt: parts per trillion or nanograms per liter (mg/L)
pCi/L: picocuries per liter (a measure of radiation)
ppq: parts per quadrillion or picogram per liter (pg/L)

Microbiological Water Quality:
In 2009, no sample results for the City of Corning were positive for Coliform. Testing for bacteriological quality in the distribution system is required by State regulations. As required by the Total Coliform Rule, each month, one water sample is taken from each sampling station with a minimum of two stations being sampled each week, and three sites sampled on the last week of the month for a total of nine samples monthly.

Lead and Copper Testing Results:
Lead and copper testing of water from individual taps in the distribution system is required by State Regulations. The table below summarizes the most recent monitoring for these constituents in milligrams per liter (mg/L).

	Year Tested	Number of samples collected	Number of samples required	90% Percentile Result (ppm)	Action Level (ppm)	No. of samples over action level
Lead	2007	20	20	nd	0.015	0
Copper	2007	20	20	.194	1.30	0

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that 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/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (1-800-426-4791).

Detected Contaminates in our water:
When thinking about detectable levels, consider the following as a way to put it all in perspective.

One Part Per Million (1ppm):
I. 1 cent in $10,000.

One Part Per Billion (1 ppb):
I. 1 cent in $10 million.

The following table lists all detected regulated and unregulated chemicals in our water during the most recent sampling period. Please note, not all sampling is required annually, in some cases our results are more than one year old. Milligrams per liter (mg/L) are equivalent to parts per million (ppm). The values shown in the table are expressed in ppm unless otherwise stated.

Chemical Detected	Source	Year Tested	Range Detected	MCL	PHG	Average	Origin
Barium	All Wells	01	ND - 100	1000	2	32.4	Erosion of natural deposits, discharges of oil drilling wastes, etc.
Fluoride (Temp. Dependent)	All Wells	01	ND - 0.12	1.7	1	.02	Erosion of natural deposits, water additives, discharge from fertilizer and aluminum factories.
Iron	All Wells	01	ND - 344	300	None	56.2	Naturally occurring
Vanadium	All Wells	02	2 - 13	N/A	50	6.8	Naturally occurring
Sodium	All Wells	02	11 – 31	N/A	N/A	19	Refers to the salt present in the water and is generally naturally occurring
Hardness (CaCO3)	All Wells	02	119 - 141	N/A	N/A	134	Is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.
Gross Alpha	All Wells	02	.26 – 1.34	15	(0)	.67	Erosion of natural deposits.
Chrome 6 (ppb)	All Wells	03	ND – 7.8	N/A	N/A	3.5	N/A
Trihalomethanes (ppb)	Designated Site	07	7.5	80	N/A	N/A	Byproduct of drinking water chlorination

Chemical Detected	Source	Year Tested	Range Detected	MCL	PHG	Average	Origin
Chlorine Level (collected with w/ bacteriological samples)	Weekly Sample sites	09	.19 - .39	4.0	4	.21	Drinking water disinfectant added for treatment.
Arsenic (ppb)	All Wells	08	ND – 3.7	10	.004	1.4	Erosion of natural deposits; runoff from orchards, etc.
Radium 228	All Wells	08	ND - .320	N/A	.019 pCi/L	.111	N/A
Nitrate	All Wells	09	3.5 – 13.3	45	45	9.4	Erosion of natural deposits, runoff and leaching from fertilizer use, septic tanks and sewers.

General Information on Drinking Water:
Drinking water is a "hidden" source of water stored in underground geologic formations through which water passes slowly. Ground water can be pumped from two primary types of geologic formations or aquifers, sediments and fractured rock. Water from precipitation or irrigation that is not absorbed by the soil or used by vegetation finds its way into the groundwater basin. Water percolates through the sediment until reaching material it cannot penetrate. Water accumulates here creating an aquifer, or saturated zone. The water table is located at the top of the saturated zone.

City Water Meters:
The water distribution system is the essential link between the water supply and the consumer. This is a conveyance system that allows water to be moved through underground piping before reaching your tap. Pumps allow water to move through the system supplying water to your home, fire hydrants, sprinkler systems, and backflow devices located throughout the City. All Residential/Commercial customers within the City service area have a water meter that measures the amount of water transferred from the City water main into the customer's plumbing system. The water meter is usually located in a meter box or small concrete vault near the street side curb or in your alleyway. Your meter registers water used in gallons and is read monthly. The previous reading is subtracted from the current reading to determine the amount of water you have used. In addition to the monthly fixed meter rate that includes the first 4,000 gallons of water used, you are billed $1.14 per each thousand gallons consumed over the base 4,000 gallons. Monthly water fees paid to the City fund the operation/maintenance and any future expansion/upgrades to the water system.

Educational 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 USEPSA's Safe Drinking Water Hotline (1-800-462-4791).

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 health care providers. USEPA/Centers for Disease Control (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 (1-800-426-4791).

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 from human activity.

Contaminants that may be present in source water include:

Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater 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 stormwater runoff, and residential uses.
Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, 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 that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California State 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.