What is a Consumer Confidence Report?

A Consumer Confidence Report is an annual report required by the State and the U.S. Environmental Protection Agency (EPA). The purpose of this report is to raise your awareness of the quality of the water served to you by the City of Dixon. There were multiple tests performed on the water served to you in calendar year 2019. This report is a summary of samples taken. Samples were analyzed by a certified laboratory, using proper techniques, assuring good, quality results. This report excludes information related to the system owned and operated by California Water Service Company (Cal Water).

Your Water Source and Supply Facilities

The source of drinking water for the City of Dixon is groundwater, located hundreds of feet below the surface. The City system operates and maintains five wells that pump water into the distribution system. The water distribution system consists of two regions and is divided geographically by the north and south. A total of three supply wells service the north and two supply wells service the south, with each zone producing approximately 4000 gallons per minute (GPM). Booster pumps pressurize the system between 52 and 57 pounds per square inch (psi) of pressure.

There are a total of four above ground reservoirs (welded steel storage tanks), with each region supplied by two reservoirs. Collectively, these reservoirs can store up to 4.3 million gallons of water (2.3 million gallons in the northern system and 2.0 million gallons in the southern system). They provide a buffer for peak demand and fire suppression. All wells and booster pump stations have backup diesel generators to provide water during power interruptions.

Historically, the ground water quality has met federal and state standards. Effective July 1, 2014, the State Water Resources Control Board (SWRCB) lowered the maximum contaminant level (MCL) for chromium monitoring from 50 parts per billion (ppb) for total chromium to 10 ppb for hexavalent chromium, also known as Chromium+6 or Cr+6. On July 30, 2015, the Board's Division of Drinking Water issued the City of Dixon a Compliance Order stating the City's water exceeded the State's Cr+6 MCL. The Compliance Order was established to give the City time (until January 1, 2020) to come into compliance without being deemed in violation of the MCL. In 2016, the City completed a Cr+6 Management Plan to review options and alternatives to address compliance. In 2017, the City completed a pilot test to study the effectiveness of a treatment process to reduce the levels below the MCL. As a result of a lawsuit filed against the State, on September 11, 2017 the Board issued an order that the "new" MCL for Cr+6 was no longer in effect. The City expects the State to resolve the issues filed in the lawsuit and determine a new MCL and implementation period. It is undetermined when the new MCL will be put into effect.

Sodium hypochlorite (12.5%; a.k.a. chlorine) was added to the water at the well for disinfection prior to entering the distribution system. The presence of a chlorine residual higher than 0.20 mg/l minimizes the possibility of microbial contamination in your drinking water. During 2019, weekly bacteriological samples were drawn at representative points in the distribution system (Table 1); biological samples were also collected whenever new lines were placed into service or when maintenance required mainline shutdowns and pressure below 5 PSI.

Commitment to Service

The City of Dixon is committed to providing great customer service. You can reach our dedicated and knowledgeable staff at the City of Dixon, City Hall for all of your billing related needs.

For billing questions contact (707) 678-7000. If there are service related questions, the same number should be used and the water operations staff will be contacted to resolve any issues. For all water quality related questions, please contact Water Operations Supervisor Jason Hoffman at 707-678-7050 Ext 5503.

A Message from the EPA

The sources of drinking water (both tap and bottled water); include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of 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 surface 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 *that* 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 by-products of industrial processes and petroleum production, and can come from gas stations, urban stormwater runoff and septic systems.

Radioactive contaminants 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 USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of the contaminants does not necessarily indicate that the 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).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing cancer 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).

If you have any questions related to water quality or this Consumer Confidence Report, please contact the City of Dixon's Water Operations Supervisor, Jason Hoffman, at (707)678-7050 Ext 5503.

Lead in Water

If present, elevated levels of lead can cause serious health problems, especially in pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and plumbing within various buildings (including, but not limited to, residential, commercial, and industrial plumbing fixtures). The City of Dixon Water Operations Division is responsible for providing high quality drinking water, but is not responsible for the variety of materials historically used in the customer plumbing after the water meter (e.g. piping, faucets, connections, etc.). 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. However, the City of Dixon did conduct the tri-annual Lead and Copper sampling event during the summer of 2018 (Table 2) and all results were well below Action Levels. More 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://epa.gov/safewater/lead.

In January 2017, the State Water Resource Control Board (SWRCB) issued a permit amendment, establishing requirements for water purveyors to provide assistance and complete lead monitoring and sampling for all Kindergarten to 12th grade schools. The City of Dixon has worked collaboratively with the school administration within the City municipal water supply system. The City of Dixon, subsequently provided assistance and completed testing for the Dixon Unified School District at three local schools (including Tremont Elementary, Gretchen Elementary, and Dixon High School) during the spring of the 18/19 school year. To obtain more information regarding the testing of lead in schools including frequently asked questions you may visit: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadsamplinginschools.html.

Radioactivity in Drinking Water

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters, Uranium and Total Radium in **excess** of the maximum contaminant level (MCL) over many years may have an increased risk of cancer.

Nitrate (as Nitrate-N) in Drinking Water

Per State regulations, if nitrate (as Nitrate N) levels are observed above 5 ppm (50 % of the MCL), but below 10 ppm (the MCL) a water purveyor shall notify their customers. Nitrate levels were observed above the 50% MCL at Well 52 (Valley Glen) of 6.1 ppm average (sampled quarterly). However, the average nitrate level in the system was observed at 4.5 ppm, well below the MCL.

Nitrate in drinking water at levels above **10 ppm** is a health risk for infants of less than six months of age. Such Nitrate levels in the 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 skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant woman and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Common Abbreviations and Terms Used in the Report

In the tables below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we have provided the following definitions:

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

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

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 residual disinfectant level or 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 or 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.

Micromhos: A former unit of electric conductance, one millionth of a mho.

Million fibers per liter (MFL): Unit measure of the presence of asbestos fibers that are longer than 10 micrometers.

Millirem per year (mrem/yr): Unit measure of radiation absorbed by the body.

"ND" means not detected and indicates that the substance was not found by laboratory analysis.

"NTU" Nephelometric Turbidity Unit: A unit used to measure the (turbidity) clarity of water.

Parts per billion (ppb) or Micrograms per liter (µg/L): one part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/L): one part by weight of analyte to 1 million parts by weight of the water sample.

Picocurie per liter (pCi/L): unit of measure for radioactivity in water.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria	1*	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source(s) of Contaminant**
Lead (ppb) As of 6/20/2018	21	0	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) As of 6/20/2018	21	0.18	0	1.3	0.30	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	**Sample Date**	**Average**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	4//17/2018 3/13/2018	57.2	40-76	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	4/17/2018 3/13/2018	202	110-330	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date(s)**	**Average**	**Range of Detection**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source(s) of Contaminant**
Arsenic (ppb)	4/17/2018 3/13/2018	2.1	ND – 3.3	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Aluminum (ppb)	4/17/2018 3/13/2018	22	ND - 110	1000	60	Erosion of natural deposits; residue from some surface water treatment processes
Barium (ppm)	4/17/2018	0.178	0.11-0.27	1	2	Erosion of natural deposits, discharge from oil drilling wastes and from metal
Chlorine (ppm)	Jan - Dec. 2019	0..94	0.81 - 1.06	[4.0]	[4.0]	Added to drinking water for disinfection
Chromium (ppm)	4/17/2018 3/13/2018	0.0224	0.018 – 0.026	0.05	0.10	Erosion of natural deposits, discharge from steel and pulp mills and chrome plating
Fluoride (ppm)	4/17/2018 3/13/2018	0.024	000000 -0.12	2.0	1.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Activity (pCi/L)	1/10/2017 8/4/2017	2.472	0 – 4.39	15	0	Erosion of natural deposits

Hexavalent Chromium (ppm) Also, known as Cr6	4/5/2018 5/1/2018	.0228	.015-.029	0.05	n/a	Erosion of natural deposits, discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities
Nitrate as N (ppm)	1/19 2/19 3/19 4/19 5/19 7/19 8/19 10/19 11/19	4.5	0.78-6.6	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate (ppb)	4/17/2018	4	4	6	1	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water because of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
Selenium (ppb)	4/17/2018 3/13/2018	1.06	ND – 5.3	50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Total Trihalomethanes (ppb)	7/2/2018	0.78	0.72 – 1.5	80	n/a	By-product of drinking water chlorination

TABLE 5 – DETECTION OF CONTAMINANTS WITH A <u>SECONDARY</u> DRINKING WATER STANDARD

*there are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetics

Chemical or Constituent (and reporting units)	**Sample Date**	**Average**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Aggressive Corrosivity	4/17/2018 3/13/2018	12	12	none	n/a	Corrosivity is a measure of how aggressive water is, for example when corroding pipes and fittings
Chloride (ppm)	4/17/2018 3/13/2018	13	11 - 17	500	n/a	Runoff/leaching from natural deposits: industrial wastes
Iron (ppb)	4/17/2018 3/13/2018	26	ND – 130	300	n/a	Leaching from natural deposits; industrial wastes
Specific Conductance (micromhos)	4/17/2018 3/13/2018	578	500 - 710	1600	n/a	Substance that form ions when in water: seawater influence
Sulfate (ppm)	4/17/2018 3/13/2018	25	16 - 31	500	n/a	Runoff/leaching from natural deposits: industrial wastes
Total Dissolved Solids (ppm)	4/17/2018 3/13/2018	338	280 - 410	1000	n/a	Runoff/leaching from natural deposits
Turbidity (NTU)	4/17/2018 3/13/2018	0.398	0.25 - 0.83	5	n/a	Turbidity in groundwater is mostly inorganic and caused by natural geological factors

* False positive. Resampled and found all samples absent for coliform and E. Coli.