



## City of Dixon Consumer Confidence Report 2017; PWSID #4810009, Permit #02-04-14P-4810009

### **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 2017. 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 wells are located throughout the system. The wells can produce approximately 7500 gallons per minute. Booster pumps pressurize the system to between 57 and 61 pounds of pressure.

The water distribution system consists of two regions and is divided geographically by the north and south. 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 or other high flow situations such as firefighting. 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 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.

Small amounts of chlorine are added to the water from the wells before it enters the distribution system. The addition of chlorine minimizes the possibility of microbial contamination in your drinking water. During 2017, weekly bacteriological samples were drawn at representative points in the distribution system (Table 1); biological samples are also collected whenever new lines are placed into service or if maintenance requires the shutting off of pressure.

### **Commitment to Service**

The City of Dixon is committed to providing great customer service. The most visible aspect of service is the billing cycle. Billing is handled by the staff at the City of Dixon City Hall. For billing questions contact (707) 678-7000. If there are service related questions, the same number should be used and the service staff will be contacted to resolve any issues.



## City of Dixon Consumer Confidence Report 2017; PWSID #4810009, Permit #02-04-14P-4810009

### **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 also come from gas stations, urban stormwater runoff and septic systems.

*Radioactive contaminants* that 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 a 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 further questions about this report or the quality of the water, please contact City of Dixon, Deborah Barr Associate Civil Engineer at (707)678-7031.

### **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 service lines and internal house plumbing. The City of Dixon is responsible to provide high quality drinking water but cannot control the material used in plumbing components. If you are concerned about lead in your water, you may wish to have your water tested. However, the City of Dixon did conduct Lead and



## City of Dixon Consumer Confidence Report 2017; PWSID #4810009, Permit #02-04-14P-4810009

Copper monitoring in 2015 (Table 2) and all results were well below Action Levels. The City is scheduled to complete the required tri-annual sampling by end of summer 2018. 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 SWRCB issued a permit amendment establishing requirements for lead monitoring and sampling at Kindergarten to 12<sup>th</sup> grade (K-12) schools to provide assistance, as requested. The City of Dixon has worked collaboratively with administration from the Dixon Unified School District regarding this requirement and intends to complete all testing during the 18/19 school year.—To obtain more information including frequently asked questions you may visit [http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/leadsamplinginschools.html](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 MCL over many years may have an increased risk of getting cancer.

### Nitrate (as Nitrate-N) in Drinking Water

The following information must be provided to our customers with nitrate (as Nitrate-N) are above 5 ppm (50 % of the MCL), but below 10 ppm (the MCL). Well 37 (Watson Ranch) had a maximum level of 5.2 ppm, Well 44 (Industrial Well) had a maximum level of 7.0 ppm, and Well 52 (Valley Glen) had a maximum level of 6.4 ppm. The average nitrate level in the system was observed at 3.86 ppm. 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've 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.



**City of Dixon Consumer Confidence Report 2017; PWSID #4810009, Permit #02-04-14P-4810009**

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.

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

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

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

Parts per billion (ppb) or Micrograms per liter ( $\mu\text{g/L}$ ): one part by weight of analyte to 1 billion parts by weight of the water sample.

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

Picocurie per liter (pCi/L): measure of the radioactivity in water



City of Dixon Consumer Confidence Report 2017; PWSID #4810009, Permit #02-04-14P-4810009

**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	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	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	90 <sup>th</sup> percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source(s) of Contaminant
Lead (ppb) As of 9-25-15	20	4.9	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) As of 9-25-15	20	0.20	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)	4/15/15	53.6	38 - 79	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	4/15/15	208	120 - 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
Barium (ppm)	4/15/15	0.20	0.12 - 0.37	1	2	Erosion of natural deposits, discharge from oil drilling wastes and from metal
Hexavalent Chromium (ppb) Also, known as Cr6	1/10/17 4/5/17 7/5/17 10/3/17	16.94	8.8 - 25	50	50	Erosion of natural deposits, discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities
Nitrate as N (ppm)	1/10/17 4/5/17 7/5/17 10/3/17	3.86	0.87 – 7.0	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits



**City of Dixon Consumer Confidence Report 2017; PWSID #4810009, Permit #02-04-14P-4810009**

	12/20/17					
Chromium (ppm)	4/15/15	0.02	0.012 - 0.034	0.05	0.05	Erosion of natural deposits, discharge from steel and pulp mills and chrome plating
Fluoride (ppm)	4/15/15	0.22	0.19 - 0.22	2.0	1.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Chlorine (ppm)	Jan - Dec. 2017	0.92	0.51 - 1.15	[4.0]	[4.0]	Added to drinking water for disinfection
Total Trihalomethanes (ppb)	7-5-17 7-19-17	2.3	1.7 - 2.9	80	n/a	By-product of drinking water chlorination
Total Radium 226 and 228 (pCi/L)	1/10/17	0.061	0.061	5	1	Erosion of natural deposits
Uranium (pCi/L)	1/10/17	0.539	0.539	20	1	Erosion of natural deposits
Gross Alpha Activity (pCi/L)	1/10/17 8/4/17	3.18	1.97 - 4.39	15	0	Erosion of natural deposits

**TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD**

<b>Chemical or Constituent (and reporting units)</b>	<b>Sample Date</b>	<b>Average</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>PHG (MCLG)</b>	<b>Typical Source of Contaminant</b>
Chloride (ppm)	4/15/15	16.80	12 - 31	500	n/a	Runoff/leaching from natural deposits: industrial wastes
Sulfate (ppm)	4/15/15	34	28 - 45	500	n/a	Runoff/leaching from natural deposits: industrial wastes
Total Dissolved Solids (ppm)	4/15/15	366	340 - 430	1000	n/a	Runoff/leaching from natural deposits
Aggressive Corrosivity (ppm)	8/4/17	10.7	10.7	none	none	
Specific Conductance (micromhos)	4/15/15	644	570 - 750	1600	n/a	Substance that form ions when in water: seawater influence