



City of Dixon's Public Water System 4810009 - 2020 Water Quality Report

What is a Consumer Confidence Report?

A Consumer Confidence Report is an annual report with a focus on the quality of water provided by your water purveyor. The City of Dixon's Public Water System is pleased to announce that the water we serve to our customers continues to meet all standards set by U.S. Environmental Protection Agency and the State Water Resources Control Board, Division of Drinking Water. The City of Dixon monitors the drinking water from source to tap and uses a certified laboratory to analyze samples collected to ensure accurate results. The results and information provided in this report are specific to the City of Dixon's Public Water System from January 1 to December 31, 2020 and may include earlier monitoring data. These results do not include water produced or served by California Water Service, Dixon District.

Do you have questions, comments, concerns, thoughts or ideas related to your water system? We encourage customer participation! City council meetings are scheduled for the first and third Tuesday of each month.

Your Water Source and Supply Facilities

The source of all drinking water in the City of Dixon is groundwater, pumped from hundreds of feet below the ground surface. The City system operates and maintains five large production wells that pump water into the distribution system. The wells are located throughout the service area and have a total capacity of 8,000 gallons per minute. The water system uses booster pumps along with the source wells to pressurize the system between 51 and 61 pounds of pressure per square inch (psi).

The water distribution system includes over 45 miles of main line and four above ground steel storage tanks. These tanks can hold a combined 4.3 million gallons of water, ensuring adequate water supply during peak demand and the high flow demands of firefighting. Each distribution facility is equipped with an emergency backup generator that provides power in the event of an outage to avoid service interruption.

Drinking water source assessments for the wells were completed between 2003 and 2007. The wells are considered most vulnerable to sewer collection systems, auto repair shops, chemical and petroleum pipelines, ag wells, and gas stations. Except for low levels of Nitrates, no chemicals associated with these activities have been detected. You may request a summary of the assessment at 707-678-7005.

Distribution Disinfection and Water Quality

Small amounts of sodium hypochlorite (chlorine) is added at each source to disinfect the water supply in the distribution system. The addition of chlorine reduces the possibility of microbiological contamination in your water supply. During 2020, weekly bacteriological samples were collected at representative points within the distribution system (Table 1). Bacteriological samples were also collected whenever a new main line was placed into service, or anytime pressure was reduced below 20 psi for a system repair.

Commitment to Service

The City of Dixon is committed to providing superior customer service. For water service or billing questions, you can reach our dedicated and knowledgeable staff at 707-678-7005. If you have questions related to water quality, please contact the Water Operations Supervisor Josh Hudson at 707-678-7050 Ext 5501. For after hour calls and emergencies, a City Operator is always available at 707-676-3005.



City of Dixon's Public Water System 4810009 - 2020 Water Quality Report

Drinking Water Facts

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that 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. U.S. EPA/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 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** can be naturally occurring or be the result of oil and gas production and mining activities.



City of Dixon's Public Water System 4810009 - 2020 Water Quality Report

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 home plumbing. The City of Dixon Water Public Water System 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 (1-800-426-4791) 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 district within the water system service area. The City of Dixon provided assistance and completed testing for the Dixon Unified School District at three local schools (Tremont Elementary, Gretchen Elementary, and Dixon High School) during the spring of 2019. For information related to the testing of lead in schools including visit: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadsamplinginschools.html

Nitrate in Drinking Water

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.

Chromium-6 MCL Update

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. On July 30, 2015, the Division of Drinking Water issued a compliance order to the City of Dixon for exceeding the State's new MCL for chromium-6. The City was given a grace period to meet the new standard by January 1, 2020. In 2016, the City completed a chromium-6 Management Plan to review treatment options and the cost associated. On May 31, 2017, the Superior Court of Sacramento County issued a judgment invalidating the revised chromium-6 MCL for drinking water, and as of September 11, 2017, the maximum contaminant level for hexavalent chromium is no longer in effect. The State has announced a notice of proposed rulemaking projected for late 2021. For the most recent info visit: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chromium6.html



City of Dixon's Public Water System 4810009 - 2020 Water Quality Report

Terms & Abbreviations Used in This Report

PDWS – Primary Drinking Water Standards: MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

SDWS – Secondary Drinking Water standards: 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.

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

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 are set by the U.S. Environmental Protection Agency (U.S. EPA).

PHG – Public Health Goal: 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.

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

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.

MRDLG – Maximum Residual Disinfectant 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.

TT – Treatment Techniques: A required process intended to reduce the level of a contaminant in drinking water.

ND – Not detectable at testing limit.

NTU – Nephelometric Turbidity Unit: A measurement of the clarity of water.

ppm – parts per million or milligrams per liter (mg/L).

ppb – parts per billion or micrograms per liter (ug/L).

pCi/L – picocuries per liter (a measure of radiation).

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

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Variations and Exemptions: Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.



City of Dixon's Public Water System 4810009 - 2020 Water Quality Report

COLIFORM BACTERIA IN THE DISTRIBUTION SYSTEM

Microbiological Contaminants	Year Sampled	Highest No. of Detections	No. of months in violation	MCL	PHG (MCLG)	Typical Source of Bacteria	In Compliance
Total Coliform Bacteria (Systems with <40 samples per-month)	2020	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment	Yes
Fecal Coliform or <i>E. coli</i>	2020	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	None	Human and animal fecal waste	Yes

LEAD AND COPPER IN THE DISTRIBUTION SYSTEM

Lead and Copper (and reporting units)	Year Sampled	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG (MCLG)	Typical Source of Contaminant	In Compliance
Lead (ppb)	2018	20	ND	0	15	.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits	Yes
Copper (ppm)	2018	20	ND	0	1.3	.30	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Yes

*In 2019, all schools that were sampled for lead in internal plumbing resulted in None Detected.

REGULATIONS FOR PUBLIC HEALTH - PRIMARY DRINKING WATER STANDARDS

Constituent (and reporting units)	Year Sampled	Range of Detection	Detections Average	MCL (MRDL)	PHG (MCLG)	Typical Source of Contaminant	In Compliance
Arsenic (ppb)	2018	ND - 3.3	2.1	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes	Yes
Aluminum (ppb)	2018	ND - 110	22	1000	600	Erosion of natural deposits; residue from some surface water treatment processes	Yes
Barium (ppm)	2018	0.11 - 0.27	0.178	1	2	Erosion of natural deposits, discharge from oil drilling wastes and from metal	Yes
Chlorine (ppm)	2020	0.89 - 0.96	0.93	[4]	[4]	Added to drinking water for disinfection	Yes
Chromium (total) (ppb)	2018	18 - 26	22.4	50	(100)	Erosion of natural deposits, discharge from steel and pulp mills and chrome plating	Yes
Fluoride (ppm)	2018	ND - 0.12	0.024	2.0	1.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Yes
Gross Alpha (pCi/L)	2020	0.768 - 2.54	1.742	15	0	Erosion of natural deposits	Yes
Nitrate as N (ppm)	2020	1.0-6.5	4.53	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	Yes



City of Dixon's Public Water System 4810009 - 2020 Water Quality Report

REGULATIONS FOR PUBLIC HEALTH - PRIMARY DRINKING WATER STANDARDS (CONTINUED)

Perchlorate (ppb)	2018	ND - 4	1.6	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 as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.	Yes
Selenium (ppb)	2018	ND - 5.3	1.06	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)	Yes
Total Trihalomethanes (ppb)	2020	ND - 0.95	0.31	80	N/A	By-product of drinking water chlorination	Yes

REGULATIONS FOR AESTHETICS - SECONDARY DRINKING WATER STANDARDS

Constituent (and reporting units)	Year Sampled	Range of Detection	Detections Average	SMCL	PHG (MCLG)	Typical Source of Contaminate	In Compliance
Chloride (ppm)	2018	11 - 17	13	500	N/A	Runoff/leaching from natural deposits; industrial wastes	Yes
Iron (ppb)	2018	ND - 130	26	300	N/A	Leaching from natural deposits; industrial wastes	Yes
Manganese (ppb)	2018	ND - 44	8.8	50	N/A	Leaching from natural deposits	Yes
Specific Conductance (us)	2018	500 - 710	578	1600	N/A	Substance that form ions when in water: seawater influence	Yes
Sulfate (ppm)	2018	16 - 31	25	500	N/A	Runoff/leaching from natural deposits; industrial wastes	Yes
Total Dissolved Solids (ppm)	2018	280 - 410	338	1000	N/A	Runoff/leaching from natural deposits	Yes
Turbidity (NTU)	2018	0.25 - 0.83	0.398	5	N/A	Turbidity in groundwater is mostly inorganic and caused by natural geological factors	Yes

UNREGULATED SUBSTANCES

Constituent (and reporting units)	Year Sampled	Range of Detection	Detections Average	MCL	PHG (MCLG)	Typical Source of Contaminate	In Compliance
Alkalinity (ppm)	2018	250 - 370	300	N/A	N/A	Waters capacity to resist acidic changes in pH; waters ability to neutralize acid (buffering capacity)	Yes
Calcium (ppm)	2018	19 - 47	30.6	N/A	N/A	Naturally present in water (determinant of water hardness)	Yes
Hardness (total) as CaCO3 (ppm)	2018	110 - 330	202	N/A	N/A	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring	Yes
Magnesium (ppm)	2018	16 - 51	30.2	N/A	N/A	Naturally present in water (determinant of water hardness)	Yes
pH (units)	2018	6.6 - 7.55	7.24	N/A	N/A	Quantitative measure of the acidity or basicity of water	Yes
Sodium (ppm)	2018	40 - 76	57.2	N/A	N/A	Salt present in the water and is generally naturally occurring	Yes