City of Patterson

2024 Water Quality Report

About This Report

This Water Quality Report provides essential information about the City of Patterson's water supply, water quality, and ongoing conservation efforts. Prepared in accordance with the U.S. Environmental Protection Agency (U.S. EPA) and State of California regulations under the Safe Drinking Water Act (SDWA), the report fulfills the requirement for water utilities to provide customers with detailed annual updates. Consumer Confidence Report (CCR) results are summarized on pages 6-7, and residents are encouraged to review the information from the U.S. EPA and the City's Department of Public Works regarding water safety.

The City of Patterson remains committed to delivering clean and reliable drinking water. In 2024, more than 600 water samples were collected and tested from multiple sources to ensure compliance with all state and federal health standards. This CCR includes data from January 1 through December 31, 2024, and reflects results from routine monitoring, self-sampling and testing conducted on biannual and triennial schedules. The report underscores the City's dedication to transparency and its ongoing efforts to protect public health through strict water standards.

Este informe contiene información muy importante sobre su agua potable. Favor de comunicarse con el Departamento de Obras Públicas de la Ciudad de Patterson al (209) 895-8060 para asistirle en español.

SYSTEM NO: CA5010017

Water Sources & Distribution

In 2024, the City delivered approximately 1.5 billion gallons of water through its potable and non-potable systems, serving around 7,370 service connections (as of December 2024). Patterson relies solely on groundwater, sourced from seven potable wells (two on standby) and three non-potable wells used exclusively for irrigation. This system helps preserve deeper aquifers for drinking water use. The City recently completed a transition from Automated Meter Reading (AMR) to Advanced Metering Infrastructure (AMI) as part of its Water Metering Project. The AMI system provides real-time usage data to residents, improves leak detection, ensures more accurate billing, and enhances the City's water management capabilities. To view your detailed water use, scan the QR code and download the EyeonWater (EOW) application.

Groundwater Management, Sustainability & Conservation Goals

The City of Patterson places strong emphasis on sustainable water management and the protection of groundwater quality. In alignment with California's Sustainable Groundwater Management Act (SGMA), the City conducts regular monitoring and implements measures to prevent contamination, ensuring a reliable drinking water supply for current and future generations.

Under SGMA and the 2024 Groundwater Sustainability Plan (GSP) for the Delta Mendota Subbasin, the City is required to implement a phased reduction in lower aquifer pumping, as outlined in the Pumping Reduction Plan (PRP) developed by the Northern Delta Mendota Region Management Committee. Beginning in January 2025, the City must reduce pumping incrementally, achieving at least 20% of the total required cut each year to reach the full reduction by 2030. In addition, Patterson must reduce indoor and outdoor water use by 26% by 2030 as part of the *Making Conservation a California Way of Life* initiative. This statewide framework establishes customized water efficiency goals for each urban water supplier, aiming to reduce water loss, decrease overall consumption and improve long-term climate resilience. These groundwater and conservation targets will be implemented in tandem.

Source(s) of water

Type of water sources(s) in use: The City of Patterson's drinking water supply comes exclusively from groundwater sources. This groundwater is extracted through multiple deep wells from the lower aquifer within the Delta-Mendota Subbasin, a part of the larger San Joaquin Valley Groundwater Basin. These sources include Well No. 2 (currently on standby)-Downtown, Well No. 5-Hartley Ave., Well No. 6 (currently on standby)-Poppy Ave., Well No. 7-Hartley Ave., Well No. 8-Orange Ave., Well No. 9-Orange Ave. and Well No. 11-Sycamore Ave. Depths of these wells include: 360 Ft , 365 Ft , 440 Ft , 470 Ft , 540 Ft , 565 Ft and 597 Ft.

Source assessments: A source water assessment was completed in October 2000 for Wells 2, 5, 6, and 7. An assessment was completed in August 2003 for Well 8, May 2007 for Well 11 and in April 2008 for Well 9.

Assessment of Vulnerability: Normal activities in and around the Patterson area can cause contamination of the groundwater, such as agricultural operations, private septic systems, and keeping of animals (i.e. horses, cows, chickens, etc.). A common contaminant associated with all these activities is nitrates. Nitrates have been detected in the local groundwater; however, the concentrations are typically low and not considered harmful to public health. The City will continue to monitor nitrate levels in the groundwater supply to detect any increases that could pose health concerns. Other contaminants associated with the activities listed above are chemicals used for agriculture, such as pesticides and herbicides. These contaminants will also be monitored.

A copy of the complete assessment is available at the State Water Resources Control Board, Division Of Drinking Water's District office located at 3021 Reynolds Ranch Parkway, Suite 260, Lodi, CA 95240. You may also request a summary by contacting (209) 948-7488.

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, 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, 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 U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the number of certain contaminants in water provided by public water systems. 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 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 U.S. EPA's Safe Drinking Water Hotline (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 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 also available from the Safe Drinking Water Hotline (800) 426-4791.

Chromium-6 in Patterson's Drinking Water: Regulatory Update & Community Assurance

Chromium is a naturally occurring metal found in rocks, soil and groundwater throughout California. It exists in multiple forms, including Chromium-3, an essential nutrient in small amounts, and Chromium-6 (Cr6), which may pose health risks if consumed in high concentrations over long periods. In Patterson, Cr6 is naturally present in the local groundwater and not the result of industrial activity or pollution. Regulatory efforts to manage Cr6 in drinking water began in 1999, when the California Office of Environmental Health Hazard Assessment (OEHHA) identified Cr6 as a potential carcinogen and proposed a Public Health Goal (PHG). After years of scientific studies, legislative action and public review, the State adopted a Maximum Contaminant Level (MCL) of 10 parts per billion (ppb) in 2014. Although that MCL was overturned in 2017 due to economic feasibility concerns, a revised MCL of 10 ppb was officially re-adopted in October 1, 2024. Unlike the unenforceable PHG of 0.02 ppb, the MCL balances health protection with what is achievable through modern treatment technologies. Between December 2024 and March 2025, one of the city's wells averaged 13 ppb, exceeding the new MCL and triggering a regulatory notification, though not a violation or public health emergency.

In response, the City has resumed its Chromium Compliance Action Plan and is updating its feasibility study to evaluate options such as wellhead treatment, centralized groundwater and surface water facilities and alternative well siting. Technologies under consideration include reverse osmosis, ion exchange and reinstalling packers to isolate deeper, lower-Cr6 aquifer zones. A prior pilot project at Well No. 7 using a packer showed moderate success in reducing Cr6 levels, but after a mechanical failure in 2023 and the device's removal, concentrations gradually returned to pre-treatment levels. Well No. 7, already on a quarterly sampling schedule, was the first to trigger an exceedance under the new rule. The City expects additional wells may also exceed the MCL during the next sampling cycle. The City has applied for assistance through the State's Drinking Water State Revolving Fund and is pursuing grants to minimize resident impacts. Required Tier 2 notices have already been sent out and quarterly updates will continue until compliance is achieved. Tier 2 notifications address non-urgent water quality issues with no immediate health risk and must be issued within 30 days, while Tier 1 notifications are for immediate health threats (like E. coli), require public notice within 24 hours and often include a Boil Water advisory. Public workshops will be held after the feasibility study is completed. While third-party vendors offer home reverse osmosis systems for those seeking extra protection, they are not required and using one is a personal choice. Chromium-6 has naturally been present in Patterson's groundwater for many years. Although new regulations have prompted action, it does not pose an immediate public health risk.

→ **Did you know?** All of Patterson's water operators are certified by the State Water Resources Control Board and together, they bring over 80 years of experience in keeping your water clean, reliable and flowing!

Essential Information

Nitrate in drinking water at levels above 10 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 a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed) and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of Patterson is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact the City of Patterson at (209) 895-8060. For information about lead in drinking water, testing methods, and ways to reduce exposure, visit the EPA's website at https://www.epa.gov/safewater/lead. For data specific to service lines in Patterson, please refer to the detailed inventory report available on our website: https://www.pattersonca.gov/1966/Lead-Service-Line-Inventory.

City Council Meetings

City Council meetings are held regularly at 1 Plaza, Patterson, CA, on the 1st and 3rd Tuesday of each month at 7:00 PM. The public is welcome to attend in person or join via teleconference by calling (669) 900-9128, Meeting ID: 693 538 4239, and Password: 20995363. Participants will have the opportunity to provide public comments. To join via PC, Mac, iPad, iPhone, or Android device, use this URL: https://us02web.zoom.us/j/6935384239?Pwd=zmzwmfdyajrstjlktnntamzcwxfxdz09. Meetings are broadcast on Comcast cable channel 7 at the following times: Wednesday at 3:00 PM, Friday at 8:00 PM, and Saturday at 12:00 PM. They are also available for public viewing on Vimeo at: https://vimeo.com/channels/patterson/.

Primary Contact: Maria Encinas at (209) 895-8061 or mencinas@pattersonca.gov or visit www.pattersonca.gov.

2024 Water Quality Reporting

The State allows us to monitor some contaminants less than once per year because the concentrations of these contaminants does not change frequently. Some of our data, though representative, are more than one year old. ND indicates samples were below detection limits, and range shows the variation across all sample sites.

Orange rows highlight contaminant exceedances.

Table 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical sources of contaminant
Total Coliform Bacteria	10/year (2024)	2	no more than 1 positive monthly sample	0	Naturally present in the environment.
Fecal coliform and E. coli	0 (2024)	ND			Human and animal fecal waste.

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

Lead and Copper	Sample Date	No. of Samples	90th percentile level detected	No. Sites Exceeding AL	AL	PHG	Typical sources of contaminant
Lead (ug/L)	(2024)	26	0	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits
Copper (mg/L)	(2024)	24	0.08	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Table 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Constituent (Unit of Measure)	Sample Date	Average	Range	MCL	PHG (MCLG)	Typical sources of contaminant
Sodium (mg/L)	(2022 - 2023)	106	75 - 143	none	none	Salt present in the water and is generally naturally occurring
Hardness (mg/L)	(2022 - 2023)	393	313 - 517	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

Constituent (Unit of Measure)	Sample Date	Average	Range	MCL (MRDL)	PHG (MCLG) (MRDLG)	Typical sources of contaminant
Arsenic (ug/L)	(2022 - 2024)	3	2 - 6	10	0.004	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Chromium (ug/L)	(2022 - 2023)	23	16 - 37	50.0	n/a	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper (mg/L)	(2022 - 2023)	0.08	ND - 0.08	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (mg/L)	(2022 - 2023)	0.2	ND - 0.4	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Hexavalent Chromium (ug/L)	(2022 - 2024)	18	14.3 - 22.8		0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.
Nitrate as N (mg/L)	(2022 - 2024)	5.5	0.8 - 13.6	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite as N (mg/L)	(2022 - 2023)	4	1.4 - 7.9	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ug/L)	(2022 - 2023)	8	5 - 12	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)
Gross Alpha (pCi/L)	(2019 - 2022)	4.66	1.45 - 7.05	15	(0)	Erosion of natural deposits.
Tetrachloroethylene (PCE) (ug/L)	(2022 - 2024)	5.9	ND - 8.2	5	0.06	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Dibromochloropropane (DBCP) (ng/L)	(2024)	ND	ND	200	1.7	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Uranium (pCi/L)	(2019 - 2022)	2.9	1.85 - 4.78	20	0.43	Erosion of natural deposits

Table 5 – TREATED DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD-N/A

Table 6- DETECTION OF CONTAMINANT WITH A SECONDARY DRINKING WATER STANDARD

Constituent (Unit of Measure)	Sample Date	Average	Range	MCL	PHG (MCLG)	Typical sources of contaminant
Chloride (mg/L)	(2022 - 2023)	137	50 - 281	500	n/a	Runoff/leaching from natural deposits; seawater influence
Color (Units)	(2022 - 2023)	5	ND - 5	15	n/a	Naturally-occurring organic materials
Copper (mg/L)	(2022 - 2023)	0.08	ND - 0.08	1.0	1.0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (ug/L)	(2022 - 2024)	260	ND - 530	300	n/a	Leaching from natural deposits; Industrial wastes
Manganese (ug/L)	(2022 - 2023)	20	ND - 20	50	n/a	Leaching from natural deposits
Specific Conductance (umhos/cm)	(2022 - 2024)	1476	902 - 1940	1600	n/a	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	(2022 - 2023)	268	210 - 305	500	n/a	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	(2022 - 2024)	986	600 - 1280	1000	n/a	Runoff/leaching from natural deposits
Turbidity (NTU)	(2022 - 2023)	0.72	ND - 3.4	5	n/a	Soil runoff

Table 7 – TREATED DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD-N/A

Table 8 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Average	Range	Notification Level	Typical sources of contaminant
Boron (mg/L)	(2022 - 2024)	0.4	0.3 - 0.6	1	Boron exposures resulted in decreased fetal weight (developmental effects) in newborn rats.
Vanadium (ug/L)	(2022 - 2023)	9	5 - 15	50	Vanadium exposures resulted in developmental and reproductive effects in rats.
Manganese (ug/L)	(2022 - 2024)	20	ND - 20	500	Manganese exposures resulted in neurological effects. High levels of manganese in people have been shown to result in adverse effects to the nervous system.

Table 9 – ADDITIONAL DETECTIONS

Chemical or Constituent (and reporting units)	Sample Date	Average	Range	Notification Level	Typical sources of contaminant
Calcium (mg/L)	(2022 - 2023)	70	56 - 95	n/a	n/a
Magnesium (mg/L)	(2022 - 2023)	53	42 -68	n/a	n/a
pH (units)	(2022 - 2023)	7.54	7.1 - 7.9	n/a	n/a
Alkalinity (mg/L)	(2022 - 2023)	156	120 - 200	n/a	n/a
Aggressiveness Index	(2022 - 2023)	11.9	11.4 - 12.3	n/a	n/a
Langelier Index	(2020 - 2023)	0.1	0.1 - 0.5	n/a	n/a

Table 10 – DETECTION OF DISINFECTANT/DISINFECTANT BYPRODUCT RULE

Chemical or Constituent (and reporting units)	Sample Date	Average	Range	MCL (MRDL)	PHG (MCLG)	Violation	Typical sources of contaminant
Total Trihalomethanes (TTHMs) (ug/L)	(2022 - 2024)	13	ND - 14	80	n/a	No	By-product of drinking water disinfection
Chlorine, Total (mg/L)	(2024)	0.00	n/a	4.0	4.0	No	Drinking water disinfectant added for treatment. Includes both free chlorine and combined chlorine.
Chlorine, Free (mg/L)	(2024)	0.80	0.20 - 0.88	4.0	4.0	No	Drinking water disinfectant added for treatment.
Haloacetic Acids (five) (ug/L)	(2022 - 2024)	2.75	ND - 4	60	n/a	No	By-product of drinking water disinfection

Important Note: Chromium (hexavalent) was detected at levels that exceed the chromium (hexavalent) MCL. While a water system of our size is not considered in violation of the chromium (hexavalent) MCL until after October 1, 2027, we are working to address this exceedance and comply with the MCL. Specifically, we are developing a compliance action plan that will identify all the steps needed to come into compliance.

DEFINITIONS

Maximum Contaminant Level (MCL): The highest level of 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.

Maximum Contaminant Level Goal (MCLG): The level of 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.

Public Health Goal (PHG): The level of contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standard (PDWS): MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.

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.

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