



SAN JOSE WATER

# Water Quality 101

*Demystifying the Consumer Confidence Report*

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# What is a Consumer Confidence Report (CCR)?

*A yearly report that provides information about the quality of drinking water in a community.*

- Also known as a water quality report or drinking water quality report
- The Environmental Protection Agency (EPA) requires community water systems to provide a CCR to their customers by July 1 each year



# Requirements for all CCRs

*SJW has produced a CCR every year since 1999*

- **Water System Information**

- A brief statement on the source of the water (e.g., rivers, lakes, reservoirs, or aquifers)

- **Detected Parameters**

- List of all detected regulated contaminants
- Level of those found during the sampling period

- **Compliance with Drinking Water Standards**

- Information on whether the water system has violated any drinking water regulations over the past year
- Explanation of the violations, if any, and any corrective actions taken

- **Educational Information**

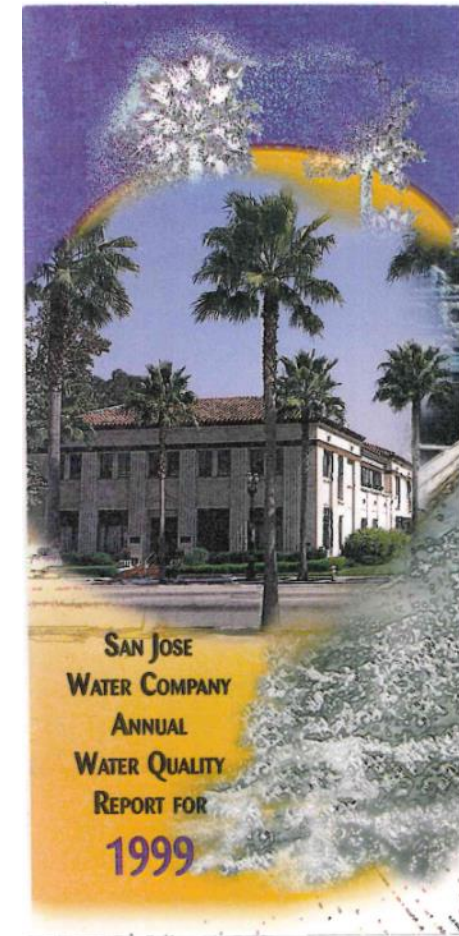
- General information about parameters and potential health effects
- Explanation of terms and abbreviations used in the report

- **Source Water Assessment Summary**

- Summary findings of any source water assessment done to determine the susceptibility of the source water to contamination

- **Information for Vulnerable Populations**

- Infants, pregnant women, the elderly, and those with compromised immune systems



**Let's take a walk through  
this year's report...**

# SJW's 2023 CCR (Annual Water Quality Report)

*Anticipated Release Date: May 2024*

- Data included in the report is from sampling conducted in 2023
- Water testing occurs at varying frequencies
  - Daily for some parameters
  - For some parameters, a running annual average if calculated over a year
  - Some parameters are sampled for once a year, once every three years, or longer



## Clean Water for Our Customers

This brochure provides a snapshot of last year's water quality data for San Jose Water (SJW). Included are details about where your water comes from and how your water quality compares to State standards. As a member of the Partnership for Safe Water, SJW remains focused on water quality and environmental stewardship to ensure continued delivery of safe and high quality water to our customers.

Since joining the Partnership for Safe Water, SJW has increased distribution system residual disinfectant levels and outperformed industry benchmarks in early detection of leaks and reducing main breaks. These Partnership-related improvements have contributed to increased water service reliability and enhanced public health protection.

# Types of Parameters

 **PRIMARY**    Primary standards relate to public health.

Legally enforceable regulations established by the EPA to protect public health by limiting the levels of contaminants in drinking water

 **SECONDARY**    Secondary standards relate to aesthetic qualities such as taste, odor, and color but do not pose any health risk.

Non-enforceable guidelines regarding parameters in drinking water that may cause aesthetic effects (such as taste, odor, or color) rather than health effects

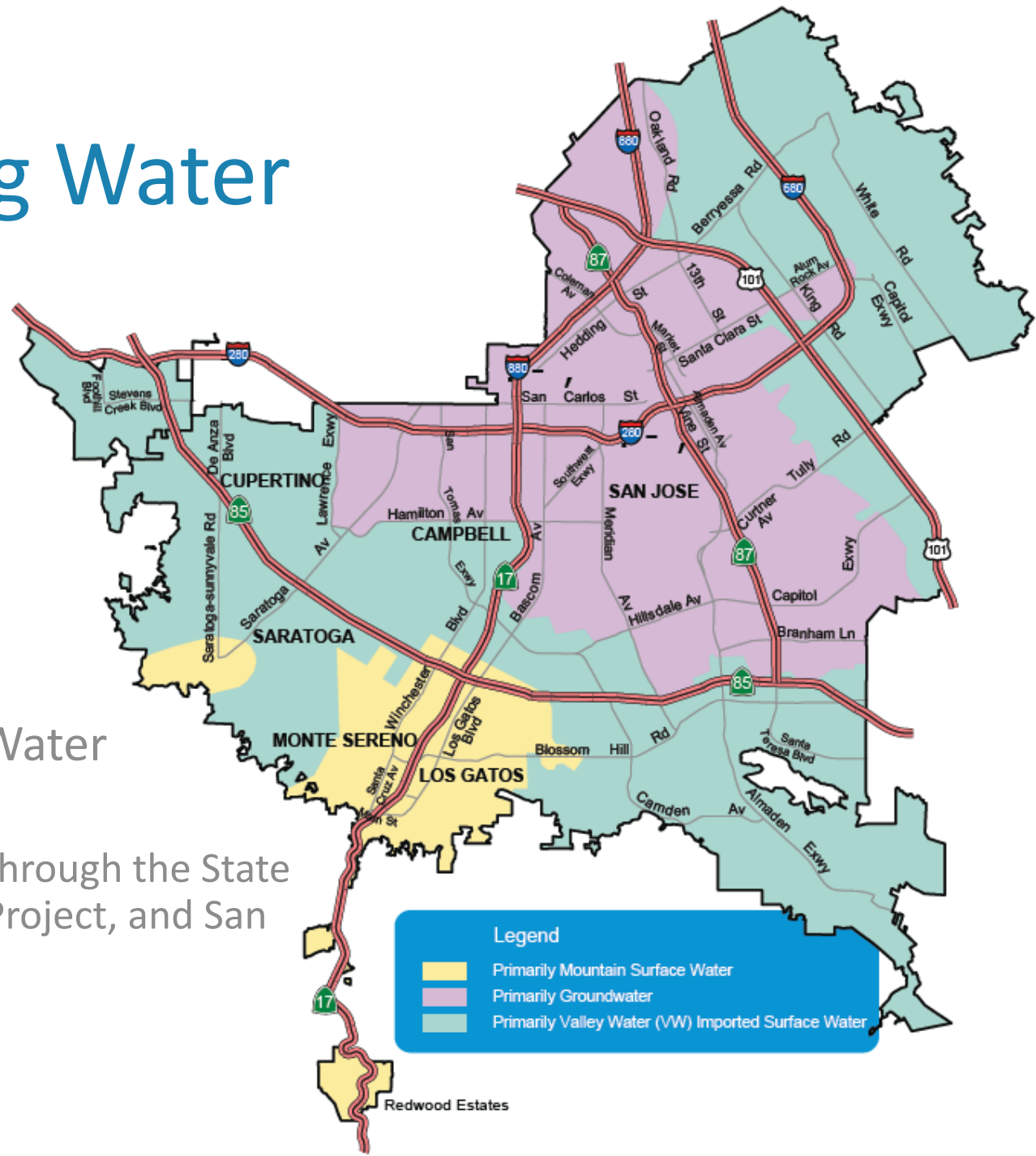
 **NOTIFICATION LEVELS** Notification levels are health-based advisory levels that lack public health goals (PHGs).

Health-based advisory levels that, when exceeded, require water systems to notify the state and provide information to their customers about the presence of unregulated contaminants

# Sources of Drinking Water

*Find your location on the map.  
Note which is your source water area.*

- Mountain Surface Water
  - Los Gatos Watershed
- Groundwater
  - Local aquifers
- Valley Water Imported Surface Water
  - Snowmelt from the Sierra Nevada
  - Water is brought into the county through the State Water Project, the Central Valley Project, and San Francisco's Hetch Hetchy system





# How to read the Water Quality Table



PARAMETER	UNITS	MCL	PHG OR (MCLG)	MOUNTAIN SURFACE WATER		GROUNDWATER		VW SURFACE WATER		TYPICAL SOURCES
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	

## SURFACE WATER PRIOR TO TREATMENT

Cryptosporidium	ppm									
Giardia	ppm									

## SURFACE WATER TREATMENT

Turbidity <sup>1</sup>	NTU									
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## IMPORTANT DEFINITIONS

**Detection Limit for Purposes of Reporting (DLR):** The lowest level of a constituent that the Department of Public Health requires to be reported.

**Maximum Contaminant Level Goal (MCLG):** 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.

**Maximum Contaminant Level (MCL):** 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.

**Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at consumer's tap.

**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.

**Not Applicable (N/A):** Not applicable.

**Not Detected (ND):** If a constituent is not measured at or above a DLR, it is reported as ND.

**Not Sampled (NS):** Source designated non-vulnerable or testing not required.

**Notification Level (NL):** A non-regulatory, health-based advisory level for contaminants in drinking water that do not have established Maximum Contaminant Levels. Systems are required to report exceedances to their governing boards and Public Authorities.

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

**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.

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

**Response Level (RL):** A non-regulatory, precautionary health-based level. Water systems are required to remove from service, provide treatment, or notify all impacted customers directly for any water source exceeding this level.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

## UNITS

**Nephelometric Turbidity Units (NTU):** A measure of the cloudiness of the water.

**One part per million (ppm):** One milligram per liter (mg/L). One ppm corresponds to a single penny in \$10,000 or one minute in two years.

**One part per billion (ppb):** One microgram per liter (µg/L). One ppb corresponds to a single penny in \$10,000,000 or one minute in 1,900 years.

**One part per trillion (ppt):** One nanogram per liter (ng/L). One ppt corresponds to a single penny in \$10,000,000,000 or one minute in 1.9 million years.

**pCi/L:** Picocuries per liter, a measure of radioactivity.

**TON:** Threshold Odor Number, a measure of odor.

**umho/cm:** Micromho per centimeter, a measure of electrical conductivity.

2 Go to this column interested in. Or listed.

3 This column not the parameter. If these units checked.

4 This column lists level (MCL). The parameter that is allowed in drinking water.

# Treatment Related Data

PARAMETER	UNITS	MCL	PHG OR (MCLG)	MOUNTAIN SURFACE WATER		GROUNDWATER		VW SURFACE WATER		TYPICAL SOURCES
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
<b>SURFACE WATER PRIOR TO TREATMENT</b>										
Cryptosporidium	oocysts/L	TT	(o)	ND	ND - 0.30	N/A	N/A	ND	ND	Naturally found in the environment.
Giardia	cysts/L	TT	(o)	0.22	ND - 2.0	N/A	N/A	ND	ND	
<b>SURFACE WATER TREATMENT</b>										
				<b>MAXIMUM</b>		<b>MAXIMUM</b>		<b>MAXIMUM</b>		
Turbidity <sup>1</sup>	NTU	TT ≤ 1 NTU	N/A	0.13		0.22		0.3		Erosion of natural deposits/run- off.
	NTU	TT = 95% of samples ≤ 0.3 NTU	N/A	100%		100%		100%		

- Cryptosporidium and Giardia are tested before treatment to guide necessary removal methods at water facilities.
- Turbidity is measured after the water has been treated to verify successful particulate and microorganism removal by treatment.

# Entry Point Data

*The "entry point to the distribution system" is where treated water leaves the treatment facility and enters the distribution network, serving as a critical sampling location to ensure water meets quality standards before it reaches customers.*

PARAMETER	UNITS	MCL	PHG OR (MCLG)	MOUNTAIN SURFACE WATER		GROUNDWATER		VW SURFACE WATER		TYPICAL SOURCES
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	
<b>ENTRY POINT SAMPLES</b>										
<b>INORGANIC MATERIALS</b>										
Aluminum	ppm	1	0.6	ND	ND - 0.14	ND	ND - 0.064	ND	ND	Erosion of natural deposits.
Arsenic	ppb	10	0.004	ND	ND	ND	ND - 4	ND	ND	
Barium	ppm	1	2	ND	ND	0.15	ND - 0.32	ND	ND	
Chromium-6 <sup>2</sup>	ppb	N/A <sup>2</sup>	0.02	ND	ND	2.9	ND - 6.4	ND	ND	
Fluoride	ppm	2	1	ND <sup>3</sup>	ND - 0.12 <sup>3</sup>	ND <sup>3</sup>	ND - 0.13 <sup>3</sup>	ND	ND - 0.16 <sup>4</sup>	
Fluoride (treated) <sup>4</sup>	ppm	2	1	N/A	N/A	N/A	N/A	0.8	0.2-0.9	1, 6, 7 <sup>5</sup>
Nitrate (as N)	ppm	10	10	ND	ND	3.2	0.6-6.4	0.8	ND - 1.4	

- Inorganic materials are minerals and compounds from natural sources or human activity.
  - Metals, salts, and other mineral-derived compounds.

# Distribution System Data

*Sample collection in the distribution system is critical for safeguarding water quality and public health throughout the water supply.*

SJW DISTRIBUTION SYSTEM SAMPLES							
<b>DISINFECTION</b>		<b>MRDL</b>	<b>MRDLG</b>	<b>RUNNING ANNUAL AVERAGE</b>			
Total Chlorine	ppm	4.0 as Cl <sub>2</sub>	4 as Cl <sub>2</sub>	1.67			Added for disinfection to control microbes
<b>DISINFECTION BY PRODUCTS</b>		<b>MCL</b>	<b>PHG</b>		<b>HIGHEST SITE AVERAGE</b>	<b>RANGE</b>	
Total Trihalomethanes	ppb	80	N/A	Samples Collected at Designated Sample Points:	68	ND - 59.63	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A		39	ND - 39.6	
<b>MICROBIOLOGICAL CONTAMINANTS</b>		<b>MCL</b>	<b>MCLG</b>		<b>AVERAGE %</b>	<b>HIGHEST MONTHLY %</b>	
Coliform Bacteria	%	> 5% of monthly samples positive	0	Samples Collected at Designated Sample Points:	0.48%	1.03%	Naturally found in the environment.
<b>LEAD AND COPPER</b>		<b>AL</b>	<b>PHG</b>		<b>90<sup>th</sup> PERCENTILE LEVEL</b>	<b>SITES ABOVE AL</b>	
Lead	ppb	15	0.2	Samples Collected at Customers' Taps (2022):	< 5.0	0	Internal Corrosion of Plumbing
Copper	ppm	1.3	0.3		0.23	0	



**All Standards for Primary Drinking Water  
MCLs Were Achieved in 2023**

# Secondary Parameters

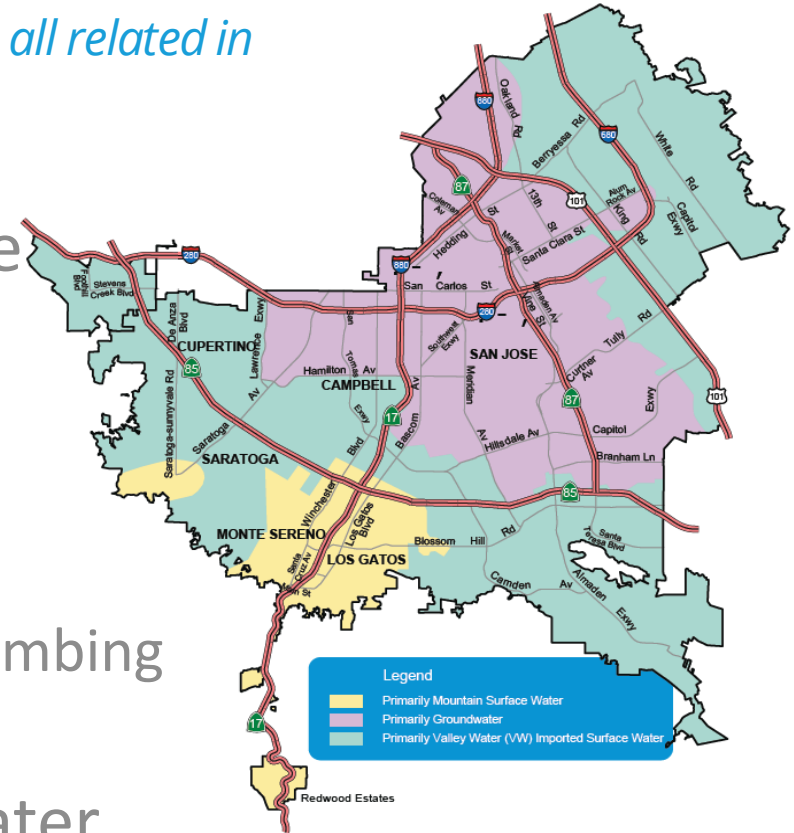
Collected from the "entry point to the distribution system" these parameters are monitored due to aesthetic qualities. They affect the taste, odor, and appearance of water.

PARAMETER	UNITS	SMCL	MOUNTAIN SURFACE WATER		GROUNDWATER		VW SURFACE WATER	
			AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE
Aluminum	ppb	200	ND	ND - 0.14	ND	ND - 0.064	ND	ND
Chloride	ppm	500	20	17-23	54	38-66	42	11 - 64
Color	CU	15	5-5	3-8	ND	ND-10	3-7	1 - 5
Hardness (as CaCO <sub>3</sub> )	ppm	N/A	133	107-158	376	210-503	86	37 - 117
Hardness (as CaCO <sub>3</sub> )	grains/gal	N/A	8	6-9	22	12 - 29	5	2 - 7
Iron	ppb	300	ND	ND	ND	ND - 230	ND	ND
Manganese	ppb	50	ND	ND - 10	ND	ND - 3.9	6	4 - 10
Odor - Threshold @ 60°C	TON	3	ND	ND	ND	ND	1.8	1.4 - 2.0
Silver	ppb	100	ND	ND	ND	ND	ND	ND
Sodium	ppm	N/A	20	19-20	33	16-52	42	20 - 57
Specific Conductance	µmho/cm	1600	285	260-310	665	430-920	391	188 - 512
Sulfate	ppm	500	27	20-34	59	38-89	56	34 - 78
Total Dissolved Solids	ppm	1000	188	160-210	475	290 - 660	226	115 - 294
Turbidity	NTU	5	0.33	0.1-0.55	0.22	ND - 1.8	0.040	0.01 - 0.3
Zinc	NTU	5	ND	ND - 0.003	ND	ND - 0.19	ND	ND

# Mineral Content

*Hardness, specific conductance, and Total Dissolved Solids (TDS) are all related in that they are measures of the mineral content of water.*

- The higher the levels of these parameters the more minerals are dissolved in the water
  - Aesthetic issues and scaling
  - + Buffer the water and maintain a neutral pH
  - + Help protect pipes and plumbing systems from corrosion and leaching of metals like lead for plumbing materials
- Mineral content is naturally higher groundwater than surface water



# Notification Levels

*A notification level is a health-based advisory level for certain unregulated contaminants that lack Maximum Contaminant Levels (MCLs) and Public Health Goals (PHGs).*

PARAMETER	UNITS	NL	RL	MOUNTAIN SURFACE WATER		GROUNDWATER		VW SURFACE WATER	
				AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE
Boron	ppb	1000	N/A	NS	NS	160 (2019 data)	150 - 160	50	ND - 168
Chlorate	ppb	800	N/A	NS	NS	NS	NS	127	68 - 265
Perfluorohexanesulfonic acid (PFHxS)	ppt	3	20	NS	NS	2.9	ND - 8.8	NS	NS
Perfluorooctanoic Acid (PFOA)	ppt	5.1	10	NS	NS	ND	ND - 2.8	NS	NS
Perfluorooctyl Sulfonate (PFOS)	ppt	6.5	40	NS	NS	2.2	ND - 8.3	NS	NS
Vanadium	ppb	50	N/A	NS	NS	NS	NS	1.7	1 - 3

- The data presented is from all wells, regardless of standby status.
- SJW has been proactively monitoring PFAS compounds in all wells since 2019.
  - 10 wells were placed on standby for exceeding the notification level of 6.5 ppt between 2019 and 2020
- In response to the detection of PFAS at some groundwater wells, SJW is actively working on the design of our first ion exchange PFAS treatment facility.

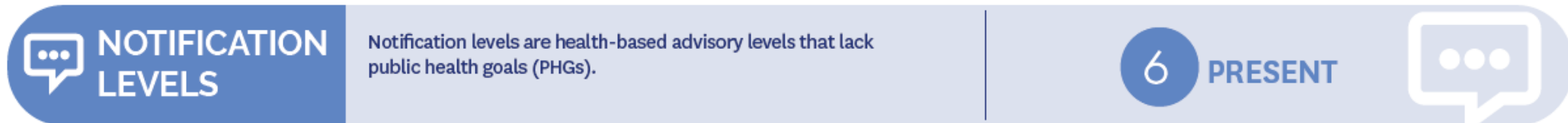
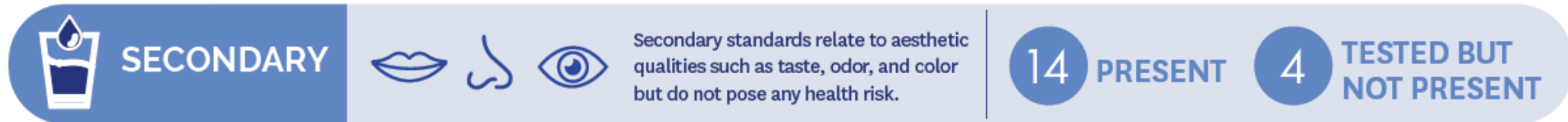


# Conclusion

Your 2023 Water Quality Report will be available May 2024 at [www.sjwater.com/ccr](http://www.sjwater.com/ccr)



All primary drinking water standards met in 2023.



*We thank you for your trust in San Jose Water, and we remain dedicated to delivering excellence in every drop.*

The image features a background of blue water with soft, out-of-focus ripples. A white rectangular box is centered on the page, containing the text "Thank You" in a bold, dark blue font.

**Thank You**

# A Diversity of Water Sources is Key to Resiliency



Lake Elsman spillway.

- Reduced Dependency on a Single Source
  - Reliance on a single water source can be risky, especially if that source experiences water quality issues, drought, or infrastructure failures.
- SJW can switch or blend sources as needed to ensure continuous supply.

*SJW's groundwater and surface water are high quality sources of drinking water that meet or exceed all primary drinking water standards set by regulatory authorities.*