

**Consumer Confidence Report
Certification Form**
(To be submitted with a copy of the CCR)

Water System Name: CITY OF MORRO BAY

Water System Number: 04010011

The water system named above hereby certifies that its Consumer Confidence Report was distributed on June 1, 2016 to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the State Water Resources Control Board, Division of Drinking Water (DDW).

Certified by: Name: ROB LIVICK
Signature: 
Title: PUBLIC WORKS DIRECTOR,
PE-PLS/CITY ENGINEER
Phone Number: (805) 772-6569 Date: 6-10-16

To summarize report delivery used and good-faith efforts taken, please complete this page by checking all items that apply and fill-in where appropriate:

- CCR was distributed by mail or other direct delivery methods (attach description of other direct delivery methods used).
- CCR was distributed using electronic delivery methods described in the Guidance for Electronic Delivery of the Consumer Confidence Report.
- "Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods:
 - Posting the CCR at the following URL: www.morrobayca.gov/CCR2015
 - Mailing the CCR to postal patrons within the service area (attach zip codes used)
 - Advertising the availability of the CCR in news media (attach copy of press release)
 - Publication of the CCR in a local newspaper of general circulation (attach a copy of the published notice, including name of newspaper and date published)
 - Posted the CCR in public places: [City Hall and Public Services](#)
 - Delivery of multiple copies of CCR to single-billed addresses serving several persons, such as apartments, businesses, and schools
 - Delivery to community organizations (attach a list of organizations)
 - Publication of the CCR in the electronic city newsletter or electronic community newsletter or listserv (attach a copy of the article or notice)
 - Electronic announcement of CCR availability via social media outlets: [Facebook](#)
 - Other (attach a list of other methods used)
- For systems serving at least 100,000 persons: Posted CCR on a publicly-accessible internet site at the following URL: www._____
- For privately-owned utilities: Delivered the CCR to the California Public Utilities Commission

Consumer Confidence Report

Consumer Confidence Report Electronic Delivery Certification

Water systems utilizing electronic distribution methods for CCR delivery must complete this page by checking all items that apply and fill-in where appropriate.

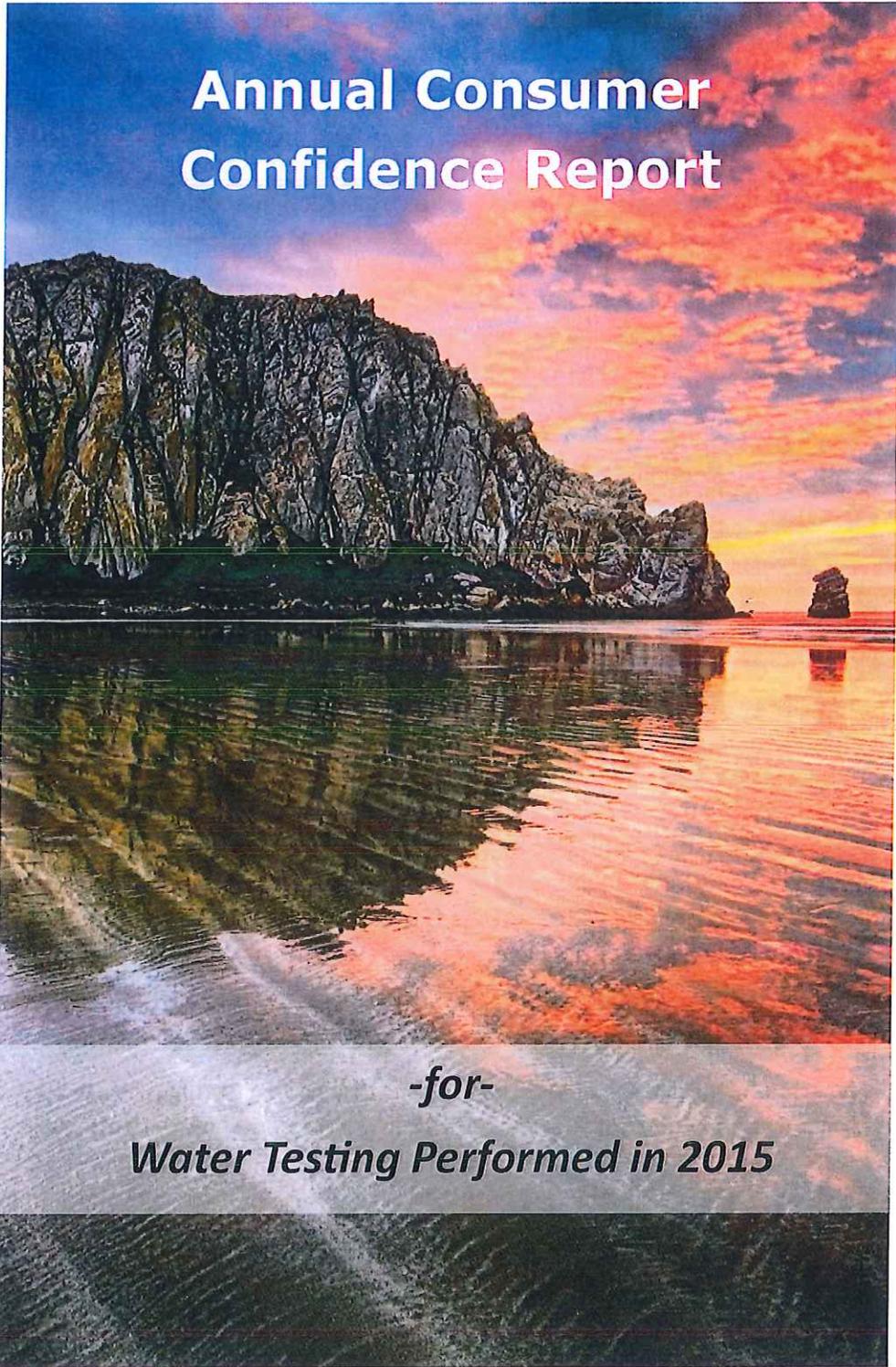
- Water system mailed a notification that the CCR is available and provides a direct URL to the CCR on a publicly available website where it can be viewed.
URL: www.morrobayca.gov/CCR2015
- Water system emailed a notification that the CCR is available and provides a direct URL to the CCR on a publicly available site on the Internet where it can be viewed.
URL: www.morrobayca.gov/CCR2015
- Water system emailed the CCR as an electronic file email attachment.
- Water system emailed the CCR text and tables inserted or embedded into the body of an email, not as an attachment (attach a copy of the emailed CCR).
- Requires prior DDW review and approval.* Water system utilized other electronic delivery method that meets the direct delivery requirement.

Provide a brief description of the water system's electronic delivery procedures and include how the water system ensures delivery to customers unable to receive electronic delivery.

The City of Morro Bay mailed a notification (attached) to all water customers in Morro Bay stating the CCR is available electronically and provided the direct URL to the CCR. Included were instructions on how to receive a paper copy. The City also e-mailed all the e-pay water customers notifying them that the CCR is available at: www.morrobayca.gov/CCR2015. The electronic version was attached to this e-mail as well. The City did receive several requests for a paper copy of the CCR, which were immediately mailed to the customers.

This form is provided as a convenience and may be used to meet the certification requirement of section 64483(c), California Code of Regulations.

CITY OF MORRO BAY



Annual Consumer Confidence Report

-for-

Water Testing Performed in 2015

PWS ID#: CA4010011

The Consumer Confidence Report (CCR) is an annual water quality report that the City of Morro Bay is required to provide to its customers under the Safe Drinking Water Act (SDWA). The purpose of the CCR is to raise customer awareness of the quality of their drinking water, what it takes to deliver water to their homes, and the importance of protecting drinking water sources.

*Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.*

Continuing Our Commitment

The City of Morro Bay proud to present our annual water quality report. This report shows the results from all of our water quality testing completed from January 1 through December 31, 2015. Morro Bay's highly competent staff is constantly seeking the best approaches to delivering to you the highest quality water possible and is dedicated to producing drinking water that meets all State and Federal standards. We remain committed to meeting the State's water source protection, water conservation and community education goals, and serving the needs of all our water users.

For more information about this report, or for any questions relating to your drinking water, you may call Rob Livick, the Public Services Director/City Engineer at the City of Morro Bay Public Services Department: (805) 772-6569.

Where Does My Water Come From?

The City of Morro Bay's primary source of water is surface water from the State Water Project. The State Water Project is administered locally by the Central Coast Water Authority (www.ccwa.com). The water is treated at the Polonio Pass Water Treatment Plant, which is near the junction of Highways 41 and 46 and water is then pumped to Morro Bay. The State Water supply can be augmented by and blended with water pumped from wells located near Keiser Park (Morro Basin) and Chorro Creek Road (Chorro Basin). Some of the well water has nitrate contaminant levels that require treatment through either blending or filtration. In addition, wells in both the Morro and Chorro basins have had periodic episodes of bacteriological contamination. All well water has a disinfectant added prior to use. The City also has a desalination plant, which is utilized as a standby source. During 2014, State Water provided 87% of the City's drinking water and the wells provided the remaining 13%, with all of this well water being treated by the Brackish Water Reverse Osmosis plant.

Drinking water source assessments (DWSA) assess the area around a drinking water source through which contaminants might move and reach that drinking water supply. They include an inventory of possible contaminating activities (PCAs) that might lead to the release of microbiological or chemical contaminants within the delineated area, and a determination of the PCAs to which the drinking water source is most vulnerable. DWSAP for the Morro and Chorro wells were completed during the 2001 fiscal year, an assessment was completed in 2009 for additional wells in the Morro basin that are being used as irrigation and feed water for the desalination plant. The results of these assessments are available to the public by contacting the Public Services Department or by visiting the State Water Resources Control Board's (State Board) website at:

(http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWSAP.shtml).

Overall, the wells had a risk assessment of low to medium. The Morro Basin wells are considered most vulnerable to the following activities not associated with any detected contaminants: gas stations, known contaminant plumes, and agricultural drainage. The Chorro Basin wells are considered most vulnerable to the following activities not associated with any detected contaminants: agricultural drainage, septic systems, wells (agricultural, irrigation), and other animal operations. Both groundwater basins have been impacted by nitrate contamination and periodic episodes of bacteriological contaminants. The City has made significant investments in providing treatment for the Morro groundwater basin.

Important Health Information

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 guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at: 1-800-426-4791.

Substances that Might be in Drinking Water

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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board's (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 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 the 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 at: 1-800-426-4791.

Water Conservation

The State mandated water conservation requirements have been extended through October 2016. As a result the City will continue to implement a 2-day per week watering schedule. Outdoor irrigation is only allowed **before 10am or after 4pm**

Even numbered addresses: Wednesday and Sunday

Odd numbered addresses: Tuesday and Saturday

Water conservation **REBATES** are still available!

- ◆ Convert your water wasting lawn with the Cash for Grass rebate, \$0.50 per Sqft (\$500)
- ◆ Toilet— replace 3 gal with dual flush (\$100)
- ◆ Irrigation retrofit rebate (\$100)
- ◆ Washing Machine – Energy Star (\$100)
- ◆ Rain Barrel rebate (\$50)
- ◆ SMART irrigation controller (\$100)



For more information:

www.morrobayca.gov/waterconservation or
www.saveourwaterrebates.com for State rebates

Nitrate in Drinking Water

Nitrate as Nitrogen 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 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 the skin. Nitrate (As N) levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women 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. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Morro Bay 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 at: 1-800-426-4791 or www.epa.gov/safewater/lead.

Contaminants that May be Present in Source Water

- * **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, agricultural applications, and septic systems.
- * **Radioactive Contaminants** that can be naturally occurring or be the result of oil and gas production and mining activities.

Sampling Results

Over the past years we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. We are happy to report that for 2015 we were not in violation at any time. While the range of contamination in the raw well water may have exceeded the drinking water standards, all of the water delivered to your home had contaminant levels reduced through either blending or treatment. The table below lists all of the drinking water contaminants that were detected during the most recent sampling for the constituent. If a contaminant was tested for and not found in the system or source water, it is not included in this report. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

PRIMARY DRINKING WATER STANDARD (Regulated In Order To Protect Against Possible Adverse Health Effects)									
SUBSTANCE (UNITS)	YEAR SAMPLED ⁵	MCL	PHG (MCLG)	STATE WATER		WELL WATER ⁴		VIOLATION	TYPICAL SOURCE
				AVERAGE AMOUNT	RANGE LOW-HIGH	AVERAGE AMOUNT	RANGE LOW-HIGH		
Aluminum (ppm)	2015	1	0.6	0.073	ND - 0.11	0.0017	ND - .01	No	Erosion of natural deposits; residue from water treatment processes
Barium (ppm)	2015	1	2	ND	ND	.147	.077 - 3.24	No	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	2015	2	1	ND	ND	0.2	0 - 0.3	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel (ppb)	2015	100	12	ND	ND	4.2	2 - 8	No	Erosion of natural deposits; discharge from metal factories
Nitrate (as Nitrogen) (ppm)	2015	10	10	0.43	0.43	8.6	.8 - 35.7	No ⁴	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	2015	50	30	ND	ND	10.1	4 - 19	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)

SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	PHG (MCLG)	STATE DLR	RANGE AVERAGE	STATE WATER
RADIONUCLIDES						
Gross Beta Particle (pCi/L)	2014	50	0	4	Range	4.1
					Average	4.1
CLARITY (NTU)						
Combined Filter	2014	TT=<1 NTU every 4 hours			Range	0.04 - 0.11
Effluent Turbidity		TT=95% of samples <0.3 NTU			%	100%

City of Morro Bay Distribution System							
SUBSTANCE (UNITS)	YEAR SAMPLED ⁵	MCL [MRDL]	PHG (MCLG) [MRDLG]	AVERAGE AMOUNT	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Haloacetic Acids (ppb)	2015	60	NA	10.94	2.0 - 17	No	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes)	2015	80	NA	53.88	49.2 - 69.3	No	By-product of drinking water disinfection
Chloramines (as Cl ₂) (ppm)	2015	4	4	1.27	.22 - 2.2	No	By-product of drinking water disinfection

SECONDARY DRINKING WATER STANDARD (Regulated In Order To Protect The Odor, Taste And Appearance Of Drinking Water)								
SUBSTANCE (UNITS)	YEAR SAMPLED ⁵	STATE MCL	STATE WATER		WELL WATER ⁴		VIOLATION	TYPICAL SOURCE
			AVERAGE AMOUNT	RANGE LOW-HIGH	AVERAGE AMOUNT	RANGE LOW-HIGH		
Chloride (ppm)	2015	500	122	80 - 205	290.9	94 - 1480 ⁴	No	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2015	300	ND	ND	190.8	ND - 2040 ⁴	No	Runoff/leaching from natural deposits; industrial wastes
Manganese (ppb)	2014	50	ND	ND	2.5	ND—30	No	Runoff/leaching from natural deposits
Specific Conductance (umhos/cm)	2015	1600	781	654 - 1160	1705	1040 - 5050 ⁴	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2015	500	97	97	96.6	66 - 149 ⁴	No	Runoff/leaching from natural deposits; industrial
Total Dissolved Solids (ppm) (TDS)	2015	1000	437	349 - 708	989.2	620 - 2870 ⁴	No	Runoff/leaching from natural deposits
Turbidity ³ (NTU)	2015	5	0.07	0.04 - 0.14	1.3	ND - 11.7 ⁴	No	Soil runoff

Footnotes:

¹ HPC results are reported from the distribution system not from the raw well water.

² Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the U.S. EPA Safe Drinking Water Hotline at 1-800-426-4791.

³ Turbidity (NTU) is a measure of the cloudiness of the water and it is a good indicator of the effectiveness of a treatment plant's filtration system.

⁴ Sampling from well water is for raw water results. Samples are taken prior to either treatment or blending.

⁵ Sampling year for well water is 2012; well water is sampled every three years, with 2012 the most recent year. Sampling will be conducted again in 2015.

⁶ All samples were re-tested and results were ND. The sampling of well water is raw water results prior to any disinfection and treatment.

DISTRIBUTION SYSTEM MICROBIOLOGICAL CONTAMINANTS

		WELL WATER ⁴			
CONTAMINANT	YEAR SAMPLED	MCL	HIGHEST NO. OF DETECTIONS IN ONE MONTH	No. of months in violation	Major Sources in drinking water
Total Coliform Bacteria (# of positive samples)	2015	0	4 ⁶	0	Naturally present in the environment
Fecal Coliform or E.coli (# of positive samples)	2015	0	0	0	Human or animal fecal waste

UNREGULATED AND OTHER SUBSTANCES (Used To Monitor Certain Contaminant Occurrences)

SUBSTANCE (UNITS)	YEAR SAMPLED ⁵	STATE WATER		WELL WATER ⁴		TYPICAL SOURCE
		AVERAGE AMOUNT	RANGE LOW-HIGH	AVERAGE AMOUNT	RANGE LOW-HIGH	
Aggressive Index (Corrosivity)	2015	ND	ND	12.1	12 - 12.5 ⁴	Balance of hydrogen, carbon & oxygen in water, affected by temperature & other factors
Alkalinity (ppm)	2015	79	66 - 92	365	310 - 500 ⁴	Runoff/leaching from natural deposits; seawater influence
Boron (ppm)	2015	ND	ND	.1	ND - 0.2 ⁴	Runoff/leaching from natural deposits
Calcium (ppm)	2015	69	58 - 96	96.4	34 - 278 ⁴	Runoff/leaching from natural deposits; seawater influence
Total Hardness as CaCO ₃ (ppm)	2015	146	128 - 206	669.8	369 - 1800 ⁴	Runoff/leaching from natural deposits
Heterotrophic Plate Count (HPC) (cfu/ml)	2015	0.5	0 - 6	3.04 ¹	ND - 1 ¹	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water
Magnesium (ppm)	2015	18	18	104.3	68 - 269	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	2015	ND	ND	2.5	ND- 30	Runoff/leaching from natural deposits
pH (units)	2015	8.2	7.6 - 8.8	7.3	6.9 - 7.6	Runoff/leaching from natural deposits
Potassium (ppm)	2015	3.4	3.4	.9	ND - 4	Runoff/leaching from natural deposits; seawater influence
Sodium (ppm)	2015	84	84	87.9	45 - 317	Runoff/leaching from natural deposits; seawater influence
Total Organic Carbon (ppm)	2015	2.5	1.9 - 3.1	NA	NA	Various natural and manmade sources
Vanadium (ppb)	2015	ND	ND	6.2	2 - 15	Vanadium is a naturally occurring "rare earth" element that is found ubiquitously in the earth's crust.

Table Definitions

Average Amount: The amount detected; or when a range of values is shown, the average detected.

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 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 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.

Million Fibers per Liter (MFL): EPA has established a maximum contaminant level (MCL) for asbestos in drinking water: 7 MFL (million fibers per liter).

Nephelometric Turbidity Units (NTU): Measurement of the clarity, or turbidity, of water.

Parts per billion (ppb): One part substance per billion parts water (or micrograms per liter).

Parts per million (ppm): One part substance per million parts water (or milligrams per liter).

Picocuries per liter (pCi/L): A measure of radioactivity.

Primary Drinking Water Standards (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:

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

NA: Not applicable **ND:** Not detected

NS: No standard **NC:** Not collected