

June, 2013

2012 WATER QUALITY REPORT

To our customers

The City of Arroyo Grande is pleased to present this annual report describing the quality of your drinking water. We sincerely hope this report provides you with a basic understanding of the City's water quality.

2012 Water Statistics

- **Surface Water Provided**
⇒ **877 Million Gallons**
- **Groundwater Pumped**
⇒ **107 Million Gallons**
- **Total Water Delivered**
⇒ **984 Million Gallons**
- **Ave. Daily Demand 2.7 Million Gallons**

Important Information About Your Drinking Water

The City of Arroyo Grande has both surface and groundwater sources of water. The surface water comes from the treatment plant at Lopez Lake. In 2012, Lopez provided 89% of the City's total supply. The City receives a blend of Lopez Water and State Water since both are delivered in the same distribution pipeline. The City, however, is not a participant in the State Water Project. The groundwater comes from City wells. The blend of surface and groundwater has an average hardness of 14 grains per gallon. *We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During year 2012 we failed to make the required annual determination of source water nitrate concentration in the water produced by domestic water supply Well No. 10, and therefore cannot be sure of the quality of our drinking water during that time. The well was sampled on March 13, 2013 and showed a concentration of non-detect.* Nitrate in drinking water at levels above 45 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 serious illness; symptoms

include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L 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. One well exceeds the maximum contaminant level for manganese. **This is reduced by filtration prior to distribution.** 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 Arroyo Grande 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 or at <http://www.epa.gov/safewater/lead>. The City will continue in its efforts to meet or exceed all State and Federal Water Quality requirements.

Where is the water tested?

Both surface and groundwater supplies are tested independently by certified commercial laboratories. The labs are certified by the Department of Public Health as environmental testing laboratories for bacteriological and chemical analyses. Federal and State requirements dictate that all regulatory analyses be performed by certified labs following approved procedures.

Where can the community participate in decisions regarding water quality?

The public can participate in the County Flood Control District, Zone 3 Advisory Group Committee concerning surface water received from the Lopez Treatment Plant. This group is composed of representatives from the Five-Cities area. The group meets on the 3rd Thursday of January, March, May, July, September, and November. Information on meeting times and places are available at slocountywater.org or can be obtained from the City of Arroyo Grande Public Works Department. Groundwater questions can be directed to the Utilities Division of the Public Works Department at 473-5460.

For additional information concerning the Annual Water Quality Report and results of UCMR monitoring, please call Shane Taylor,

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

Utilities Supervisor at 473-5464.

TERMS USED IN THIS REPORT:

Maximum Contaminant Level Goal (MCLG) and Public Health Goal (PHG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the Federal Environmental Protection Agency and PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level (MCL) – The highest level of a contaminant 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 the tap.

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

Secondary Drinking Water Standards (SDWS) – 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.

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

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

NS (No Standard): Contaminant for which there is no established MCL.

ND (Not Detected): Contaminant is not detectable at testing limit

pCi/L: picoCuries per liter (a measure of radiation)

ppm: parts per million, or milligrams per liter (mg/L)

ppb: parts per billion, or micrograms per liter (µg/L)

NTU: Nephelometric Turbidity Unit

TON: Threshold Odor Number

LI: Langelier Index; Noncorrosive = Any positive value, Corrosive = Any negative value

The sources of drinking water (both tap and bottled) 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which 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*, which 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, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants* which 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 California Department of Public Health (CDPH) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

Tables 1 through 6 list all of the drinking water contaminants that were detected from January 2012 through December 2012, unless otherwise noted. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. The CDPH requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, may be more than one year old.

Table 1 - Treatment of surface water sources		
	Treatment Technique for Lopez Project	Treatment Technique for State Water Conventional Treatment
Turbidity Performance Standard – Turbidity measures the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity of filtered water must be less than or equal to 0.3 NTU in 95% of measurements in a month. Not exceed 1.0 NTU for more than eight consecutive hours. Not exceed 1 NTU for more than eight consecutive hours.		
Lowest monthly percentage of samples that met Turbidity Performance Standard 1.	99.4%	100%
Highest single turbidity measurement during the year.	0.123 NTU	0.13
The number of violations of any surface water treatment requirement.	0	0

Table 2 - Microbiological Contaminants (if detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	1	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or E. coli	0	0	Routine and repeat samples detect total coliform and either sample also detects fecal coliform or E. coli	0	Human and animal fecal waste

Table 3 - Detection of Contaminants with a Primary Drinking Water Standard Contaminant (reporting units)	Lopez WTP				State Water		Groundwater		Potential Source of Contamination
	MCL	PHG(MCLG)	Range	Average	Range	Average	Range	Average	
Aluminum (ppb)	1000	600	ND - 85	30	ND - 120	69		ND	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	10	-----		2.2		ND	ND - 2.1	ND	Runoff from orchards; natural deposits
Fluoride (ppb)	2000	1000		0.25		ND	0.29 - 0.34	0.30	Erosion of natural deposits
Nitrate (ppm)	45	45		ND		0.49	ND - 35	19	Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	50			ND		ND	ND-5	0.8	Runoff/leaching from natural deposits
Haloacetic Acids (ppb)	60	-----	14.6 - 29	27.7	5.4 - 17	11	17 - 29.1*	19.6*	By-product of drinking water chlorination
Total Chlorine Residual (ppm)	MRDL = 4.0 as CL ₂	[4]	1.6 - 2.2	1.99	1.5 - 3.1	2.2	1.23 - 1.92*	1.62*	Drinking water disinfectant added for treatment
Chlorite (ppb)	1000	(800)	.41 - .65	.54		ND		ND	Byproduct of drinking water disinfection
Chlorine Dioxide (ppb)	800 as ClO ₂	[800]	20 - 270	153		NA		ND	Drinking water disinfectant added for treatment
Total Organic Carbon (ppm)	TT	-----		ND	1.4 - 2.4	1.8		ND	Various natural and manmade sources
Nitrite & Nitrate as N (ppb)	10000	10000		ND	ND	2.2	ND - 7900	4870	Runoff/leaching from fertilizer use; sewage; natural erosion
Gross Alpha Particle Activity (pCi/L)	15	(0)		ND	ND	4	ND - 6.4	2.2	Erosion of natural deposits
Total Trihalomethanes (ppb)	80	-----	26.7 - 50.4	36.7	20 - 77	46	19.2 - 48.5*	36.7*	By-product of drinking water chlorination

*These sample results are from the distribution system only.

Table 4 - Detection of Contaminants with a Secondary Drinking Water Standard Contaminant (reporting units)	Lopez WTP			State Water		Groundwater		Potential Source of Contamination
	MCL	Range	Average	Range	Average	Range	Average	
Aluminum (ppb)	200	ND - 85	30	ND - 120	69		ND	Naturally present in the environment
Chloride (ppm)	500		38.8	46 - 146	86	27 - 88	48	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	300		ND		ND	ND - 430	93.3	Leaching from natural deposits
Manganese (ppb)	50		ND		ND	ND - 160	4.1	Leaching from natural deposits
Color (CU)	15		2		ND	ND	ND	Naturally occurring organic materials
Corrosivity (LI)	Noncorrosive				Noncorrosive		Noncorrosive	Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Odor - (Ton)	3	1.0 - 4.5	1.9		ND	1	1	Naturally occurring organic materials
Specific Conductance (micromhos)	1600		638	344 - 706	522	590 - 1000	831.4	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	500		92		71	47 - 180	134.2	Runoff/leaching from natural deposits; industrial wastes
Turbidity (NTU)	5	0.05 - 0.8	0.08	0.04-0.10	0.05	ND - 4.54	0.64	Soil Runoff
Total Dissolved Solids (ppm)	1000		420	202 - 417	308	380 - 680	480	Runoff/leaching from natural deposits

Table 5 - Detection of Contaminants without a Drinking Water Standard	Lopez WTP		State Water		Groundwater		
Contaminant (reporting units)	Range	Average	Range	Average	Range	Average	Potential Source of Contamination
Alkalinity as CaCO ₃ (ppm)		180	46 - 86	67	110 - 400	217.1	Runoff/leaching from natural deposits; seawater influence
Calcium (ppm)		55	30 - 76	49	41 - 130	80	Runoff/leaching from natural deposits; seawater influence
Hardness (ppm)		260	64 - 156	101	220 - 520	380	Usually found in ground/surface water
Magnesium (ppm)		31		13	18 - 48	35.4	Runoff/leaching from natural deposits; seawater influence
PH	8.11 - 8.12	8.22	7.2 - 8.8	8.3	7.2 - 7.5	7.3	Runoff/leaching from natural deposits; seawater influence
Potassium (ppm)		ND		2.6	2.1 - 3.9	2.8	Runoff/leaching from natural deposits; seawater influence
Sodium (ppm)		38		62	36 - 70	44.8	Runoff/leaching from natural deposits; seawater influence
Vanadium (ppb)		ND		ND	ND - 5	2.64	Runoff/leaching from natural deposits

Table 6 - Sampling Results Showing the Detection of Lead and Copper						
Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	No. of samples collected	90 th percentile level detected	No. Sites exceeding AL	AL	MCLG	Typical Source of Contamination
Lead (ppb)	30	ND	0	15	2	Internal corrosion of household water plumbing systems
Copper (ppm)	30	1.2	2	1.3	0.17	Internal corrosion of household water plumbing systems

Additional General Information on Drinking Water

All 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 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 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).

A source water assessment was conducted for the City of Arroyo Grande water system in May 2013. No contaminants have been detected in the water supply, however the source is considered most vulnerable to the following activities: agricultural drainage, sewer collection systems, utility stations, agricultural wells, grazing, and NPDES/WDR permitted discharges. A completed copy of the assessment may be viewed at 1375 Ash Street, Arroyo Grande, CA 93420.

City of Arroyo Grande
 Public Works Department
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