

June, 2008

2007 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.

2007 Water Statistics

- Surface Water Provided
⇒755 Million Gallons
- Groundwater Pumped
⇒415 Million Gallons
- Total Water Delivered
⇒1,170 Million Gallons
- Ave. Daily Demand 3.2 Million Gallons

What is the source of my 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 2007, Lopez provided 65% 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 19 grains per gallon. At the present time, production from one of the City's seven wells exceeds the maximum contaminant level for nitrate concentration. This amount has declined over the past five years. **This condition is mitigated by blending prior to distribution.** Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. High 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. High nitrate levels may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme

deficiencies. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider or choose to use bottled water for mixing formula and juice for your baby. If you are pregnant, you should drink bottled water. One well exceeds the maximum contaminant level for manganese. **This is reduced by filtration prior to distribution.** The City of Arroyo Grande is committed to providing its customers with the highest quality of water possible. 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 published in the newspaper 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.

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

For additional information concerning the Annual Water Quality Report and results of UCMR monitoring, please call Shane Taylor, Public Works 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 Health Services (DHS) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. DHS 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 2007 through December 2007, unless otherwise noted. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. The DHS 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.

| | Treatment Technique for Lopez Project Conventional Treatment | 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. | 98.7% | 100% |
| Highest single turbidity measurement during the year. | 0.41 NTU | 0.22 |
| The number of violations of any surface water treatment requirement. | 0 | 0 |

| Contaminant (reporting units) | Lopez WTP | | State Water | | Groundwater | | Potential Source of Contamination | |
|-------------------------------|-------------------------|------------|-------------|---------|-------------|---------|-----------------------------------|--------------------------------------|
| | MCL | PHG (MCLG) | Range | Average | Range | Average | | |
| Total Coliform Bacteria | 5.0% of monthly samples | (0) | | ND | | ND | 0% | Naturally present in the environment |

| Table 3 - Detection of Contaminants with a Primary Drinking Water Standard | | | Lopez WTP | | State Water | | Groundwater | | |
|--|-------------------------------|-----------|-----------|---------|-------------|---------|-------------|---------|---|
| Contaminant (reporting units) | MCL | PHG(MCLG) | Range | Average | Range | Average | Range | Average | Potential Source of Contamination |
| Aluminum (ppb) | 1000 | 600 | | ND | 28 - 150 | 81 | | ND | Erosion of natural deposits; residue from some surface water treatment processes |
| Arsenic (ppb) | 50 | ----- | | 5.0 | ND | ND | | ND | Runoff from orchards; natural deposits |
| Fluoride (ppb) | 2000 | 1000 | | 370 | | ND | 230 - 330 | 260 | Erosion of natural deposits |
| Nitrate (ppm) | 45 | 45 | | ND | ND - 2.0 | ND | 16 - 56 | 23.4 | Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Selenium (ppb) | 50 | | | ND | | ND | ND-10 | 8.2 | Runoff/leaching from natural deposits |
| Haloacetic Acids (ppb) | 60 | ----- | 15 - 24 | 28 | 5.7 - 17 | 8.3 | ND - 27.6* | 12.9* | By-product of drinking water chlorination |
| Total Chlorine Residual (ppm) | MRDL = 4.0 as CL ₂ | [4] | .20 - 3 | 1.75 | 1.06 - 2.6 | 1.8 | 1.19- 1.54* | 1.36* | Drinking water disinfectant added for treatment |
| Chlorite (ppb) | 1000 | (800) | ND - 940 | 680 | | ND | | ND | Byproduct of drinking water disinfection |
| Chlorine Dioxide (ppb) | 800 as ClO ₂ | [800] | ND - 260 | 40 | | NA | | ND | Drinking water disinfectant added for treatment |
| Total Organic Carbon (ppm) | TT | ----- | 4.5 - 5.2 | 4.8 | 1.1 - 2.5 | 1.7 | | ND | Various natural and manmade sources |
| Nitrite & Nitrate as N (ppb) | 10000 | 10000 | | ND | ND - 450 | 220 | 510 - 13000 | 6172.8 | Runoff/leaching from fertilizer use; sewage; natural erosion |
| Gross Alpha Particle Activity (pCi/L) | 15 | (0) | ND - 1.93 | 0.8 | ND | ND | ND - 7.6 | 4.2 | Erosion of natural deposits |
| Total Trihalomethanes (ppb) | 80 | ----- | 24 - 61 | 63 | 38 - 56 | 45 | ND - 68.3* | 29.1* | 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 | | | Lopez WTP | | State Water | | Groundwater | | |
|--|--------------|--|-----------|---------|-------------|--------------|-------------|--------------|---|
| Contaminant (reporting units) | MCL | | Range | Average | Range | Average | Range | Average | Potential Source of Contamination |
| Aluminum (ppb) | 200 | | | ND | 28 - 150 | 81 | | ND | Naturally present in the environment |
| Chloride (ppm) | 500 | | 20 - 23 | 22 | 45 - 148 | 90 | 27 - 120 | 53.6 | Runoff/leaching from natural deposits; seawater influence |
| Iron (ppb) | 300 | | | ND | | ND | ND - 140 | 29.7 | Leaching from natural deposits |
| Manganese (ppb) | 50 | | | ND | | ND | 36 - 170 | 15 | Leaching from natural deposits |
| Color (CU) | 15 | | | 2 | | 3 | ND | ND | Naturally occurring organic materials |
| Corrosivity (LI) | Noncorrosive | | 0.5 - 0.6 | 0.8 | | 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 - 2 | 1.6 | 1 - 3 | 1 | | 1 | Naturally occurring organic materials |
| Specific Conductance (micromhos) | 1600 | | 720 - 760 | 740 | 337 - 657 | 524 | 640 - 1000 | 852.8 | Runoff/leaching from natural deposits; seawater influence |
| Sulfate (ppm) | 500 | | 97 - 110 | 100 | | 39 | 79 - 180 | 144.1 | Runoff/leaching from natural deposits; industrial wastes |
| Turbidity (NTU) | 5 | | .05 - 2.9 | 0.11 | 0.03-0.31 | 0.05 | 0.1 - 0.5 | 0.18 | Soil Runoff |
| Total Dissolved Solids (ppm) | 1000 | | 450 -470 | 460 | 159 - 389 | 273 | 410 - 640 | 552.8 | 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) | 250 - 300 | 280 | 56 - 86 | 71 | 120 - 400 | 220 | Runoff/leaching from natural deposits; seawater influence |
| Calcium (ppm) | 77 - 81 | 79 | 34 - 86 | 50 | 70 - 150 | 102 | Runoff/leaching from natural deposits; seawater influence |
| Hardness (ppm) | 350 - 370 | 360 | 72 - 130 | 101 | 240 - 510 | 365.7 | Usually found in ground/surface water |
| Magnesium (ppm) | 36 - 43 | 39 | | 9.5 | 22 - 47 | 35.1 | Runoff/leaching from natural deposits; seawater influence |
| PH | 7.7 - 8.4 | 8.1 | 7.3 - 9.5 | 8.25 | 7.4 - 8.0 | 7.7 | Runoff/leaching from natural deposits; seawater influence |
| Potassium (ppm) | | ND | | 2.3 | 2.5 - 5.1 | 3.1 | Runoff/leaching from natural deposits; seawater influence |
| Sodium (ppm) | 23 - 28 | 26 | | 45 | 40 - 72 | 50.1 | Runoff/leaching from natural deposits; seawater influence |
| Vanadium (ppb) | 3.8 - 6.2 | 4.9 | | 3.7 | ND - 27 | 15.1 | 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 | 0.880 | 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 August 2001. 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, known contaminate plumes, underground storage tanks, grazing, and dry cleaners. A completed copy of the assessment may be viewed at 1375 Ash Street, Arroyo Grande, CA 93420.

City of Arroyo Grande
 Public Works Department
 P.O. Box 550
 Arroyo Grande, CA 93421

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