In order to ensure that tap water is safe to drink...

...the US Environmental Protection Agency (USEPA) and the California Department of Health Services (DHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

The City of Napa is committed to providing a safe and reliable supply of quality drinking water that meets all federal and state drinking water standards. 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 Environmental Protection Agency’s Safe Drinking Water Hotline (800) 426-4791, or visit the website at http://www.epa.gov/safewater/hfacts.html.

After reading this report, if you have any questions regarding the water quality or the Water Division in general, please call (707) 257-9521.

An emergency phone number is available for customer use during weekends, holidays and after office hours: (707) 253-4451. For more information, please contact Turan Ramadan at (707) 258-2961.

The City of Napa also encourages citizens to participate in our City Council meetings, which take place on the first and third Tuesday of each month at 3:30-5:00 pm and again at 6:30-9:00 pm, in the Council Chambers at City Hall, 955 School Street. Please see our website at http://www.cityofnapa.org for more information concerning city activities.

Non-English speaking residents may contact the water division to obtain a translated copy of this report or receive assistance in the appropriate language as this report contains important information about your drinking water.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien o llame al (707) 257-9521.

CITY of NAPA

2002 DRINKING WATER QUALITY REPORT TO CONSUMERS

Date Printed: April 2003
FREQUENTLY ASKED QUESTIONS ABOUT NAPA'S WATER

Q. Does the City of Napa add fluoride to the water supply?

A. No. The only fluoride present in the Napa water supply is naturally occurring. Based on generally accepted scientific knowledge, the Centers for Disease Control (CDC) has established an optimal level for fluoride in drinking water of 0.7 – 1.2 ppm to fight tooth decay. Residents concerned about getting enough fluoride should consult their dentist about fluoride rinses, tablets, drops and gels.

Q. What is the hardness level in the City of Napa?

A. The City of Napa’s water is moderate to moderately hard. Total hardness runs from about 3.6 to 7.9 grains per gallon, depending on which of the three treatment plants are in line. Most parts of the City receive water in the moderate 5–7 grains per gallon range.

Q. Is the City of Napa affected by the lowering arsenic standard?

A. In 2002, the level detected in our source waters was 6.86 ppb, which is within the current MCL standard of 50 ppb. The current MCL standard of 50 ppb remains in effect until 2006, when it lowers to 10 ppb.

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**LEGEND**

- NTU = Nephelometric Turbidity Units is a measure of the clarity of water.
- pCi/L = picocuries per liter (a measure of radioactivity in water)
- ppm = parts per million, or milligrams per liter (mg/L)
- ppb = parts per billion, or micrograms per liter (µg/L)
- ND = Not detectable at testing limit
- NS = No Standard Developed
- UNIT = Unit of measurement
- NA = Not Applicable
- WTP = Water Treatment Plant

1 grain/gal = 17.1 ppm (mg/L)

**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.

**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 United States EPA.

**MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL)** - The level of a disinfectant added for water treatment that may not be exceeded at the 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 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.

**TREATMENT TECHNIQUE (TT)** - A required process intended to reduce the level of a contaminant in drinking water.

**PRIMARY DRINKING WATER STANDARD (PDWS)** - MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**ACTION LEVEL (AL)** - The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

*Milliken Water Treatment Plant was not in production during raw water sample collection.*
**MICROBIOLOGICAL CONTAMINANTS**

Monitoring for bacteriological constituents in the distribution system is required to determine the presence of microbial contaminants such as Coliform, Fecal Coliform, E. Coli and Turbidity. Napa has detected and treated the following bacteriological contaminants.

**COLIFORM BACTERIA**

Coliform bacteria are naturally present in the environment, and are an indicator that other, potentially harmful bacteria may be present. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems. Below is a summary of the monitoring done to verify that the finished drinking water is free of this contaminant.

<table>
<thead>
<tr>
<th>Minimum Number of Monthly Samples Required</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum % of Positive Results Allowed (MCLG):</td>
<td>Less than 5%</td>
</tr>
<tr>
<td>Average Monthly Number of Samples Taken in 2002:</td>
<td>96</td>
</tr>
<tr>
<td>Total Number of Samples Taken in 2002:</td>
<td>1,158</td>
</tr>
<tr>
<td>Total % of Positive Samples during Highest Month Detected:</td>
<td>1.01%</td>
</tr>
<tr>
<td>Total Number of Positive Samples Taken in 2002:</td>
<td>2</td>
</tr>
<tr>
<td>Total % of Coliform Bacteria Tested Positive in 2002:</td>
<td>0.17%</td>
</tr>
</tbody>
</table>

All Distribution System Samples Had Detectable Chlorine Residual —not to exceed 4.0 mg/L Chlorine

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**LEAD AND COPPER**

This table summarizes the most recent samples taken from individual taps from locations within the water system. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of our data, though representative, are more than one year old. To be in compliance with the Lead and Copper Rule, the level detected at the 90th percentile must be below the action level. **While the City is in compliance with the rule, please note that there were 6 sites that exceeded the AL for Lead and 3 sites that exceeded the AL for copper.** 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 flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800) 426-4791.

<table>
<thead>
<tr>
<th>CONTAMINANT</th>
<th>UNITS</th>
<th>MCL</th>
<th>NO. OF SAMPLES REQUIRED</th>
<th>NO. OF SAMPLES COLLECTED</th>
<th>LEVEL DETECTED 90TH%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>ppb</td>
<td>AL = 15</td>
<td>60</td>
<td>61</td>
<td>10</td>
</tr>
<tr>
<td>Copper</td>
<td>ppb</td>
<td>AL = 1300</td>
<td>60</td>
<td>61</td>
<td>560</td>
</tr>
</tbody>
</table>

**MAJOR SOURCE IN DRINKING WATER**

- Plumbing corrosion, erosion of natural deposits

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**VOLATILE ORGANIC CONTAMINANTS (VOCs)**

**TRIHALOMETHANES (THM) AND HALOACETIC ACID (HAA)**

The following VOCs have been detected but are not in violation of the EPA’s MCL standards.

<table>
<thead>
<tr>
<th>CONTAMINANT</th>
<th>UNITS</th>
<th>MCL</th>
<th>PHG</th>
<th>LEVEL DETECTED</th>
<th>MAJOR SOURCE IN DRINKING WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTHM</td>
<td>ppb</td>
<td>80</td>
<td>N/A</td>
<td>Highest Running Annual Avg = 58.6 ppb</td>
<td>A by-product of drinking water chlorination</td>
</tr>
<tr>
<td></td>
<td>Range = 32.0 - 83.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HAA</td>
<td>ppb</td>
<td>60</td>
<td>N/A</td>
<td>Highest Running Annual Avg = 21 ppb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range = ND - 51.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TURBIDITY**

Turbidity has no health effects. However, it can interfere with disinfection and provide a medium for microbial growth. Higher turbidity levels may indicate the presence of disease-causing organisms, including bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and headaches. The table summarizes Napa’s turbidity monitoring.

<table>
<thead>
<tr>
<th>TREATMENT PLANT</th>
<th>PERFORMANCE STANDARD (Treatment Technique)</th>
<th>HIGHEST SINGLE MEASUREMENT (NTU)</th>
<th>LOWEST MONTHLY % OF SAMPLES MEETING TURBIDITY LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMESON CANYON WTP</td>
<td>0.3 NTU in 95% of the measurements taken each month, and shall not exceed 1.0 NTU at any time</td>
<td>1.0</td>
<td>97%</td>
</tr>
<tr>
<td>HENNESSEY WTP</td>
<td></td>
<td>0.9</td>
<td>100%</td>
</tr>
<tr>
<td>MILLIKEN WTP</td>
<td></td>
<td>0.6</td>
<td>92%</td>
</tr>
</tbody>
</table>

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**SPECIAL INFORMATION**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 (800-426-4791).
THE CITY OF NAPA continuously tests the water quality for a variety of constituents as required by state regulations. The tables show those contaminants detected and their levels. This Water Quality Report represents the chemical water quality data for each water source serving the City of Napa, for the months of January 1, 2002 to December 31, 2002.

SOURCE WATER INFORMATION
Drinking water sources (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 human activity.

The City of Napa Water Division owns and operates three surface-type water sources: 1) Barker Slough in the Sacramento Delta via the North Bay Aqueduct, 2) Lake Hennessey, and 3) Lake Milliken.

Contaminants that may be present in source water include:
- **Microbial contaminants**, such as viruses and bacteria, 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**, 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 byproducts 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.

SOURCE WATER ASSESSMENT and VULNERABILITY SUMMARY
Source Water Assessments evaluate the quality of the water used as drinking water supplies for local communities. The assessment survey examines activities associated with the specific waterway and surrounding areas to determine their contribution to contamination. These potential contributors are then compiled into a Vulnerability Summary or Sanitary Survey. Results from the Vulnerability Summary and Sanitary Survey show that the most significant potential sources of contaminants for the City of Napa’s source waters are:

**Lake Hennessey (Assessment Completed, March 2002):**
- Pacific Union College Waste Water Treatment Plant
- Septic Tank Systems (in Angwin)
- Vineyards
- Hazardous Material Spills Due to Traffic Accidents (particularly on Highway 128 near the lake)
- Fires
- Grazing Animals
- Wild Animals

**Lake Milliken (Assessment Completed, March 2002):**
- Grazing Animals
- Wild Animals
- Fires
- Vineyards

**Sacramento Delta (Assessment Completed, December 2002):**
- Recreational Use
- Urban & Agricultural Runoff
- Grazing Animals
- Herbicide Application
- Seawater Intrusion

COMPLIANCE WITH DRINKING WATER STANDARDS
To protect public health, the Environmental Protection Agency (EPA) and the California Department of Health Services (DOHS) set maximum contaminant levels (MCL), and maximum contaminant level goals (MCLG) or action levels (AL) for contaminants. Drinking water regulations also require certain water treatment techniques to reduce the level of contaminants.

A primary purpose of this annual report is to provide Napa's water consumers with specific information regarding any contaminants detected that are in violation of the regulations set forth by the EPA, as well as the related potential adverse health effects. The legend will assist you in reading the tables of data representing Napa's water quality and contaminant tests. Every regulated contaminant that we detected in the water is listed here. The table contains the names of the substances, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the typical source of such contaminants, and other notes explaining our monitoring process or specific findings. It is important that the consumer understands the definitions of MCL and MCLG when reading the tables.

OTHER MONITORING
Napa tests its source water for hundreds of organic chemicals on a quarterly basis and none have been detected in the last five years. The city also tests for other substances and microscopic organisms in our finished water. These include Aluminum, Copper, Iron, Manganese, color, Odor-Threshold, Calcium, Chlorine, Alkalinity, Magnesium, Sodium, specific conductance, Sulfate, total dissolved solids and total hardness. Monitoring these constituents helps the city maintain the highest standard of taste, odor and appearance in our treated water.