NOVATO
ANNUAL WATER QUALITY REPORT

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Sources of Novato's Water

In August of 2006, North Marin Water District's new Stafford Lake water treatment plant began producing water. This new plant was specially designed to exceed strict new federal standards for water quality. This plant meets about 20% of the water needs of our community. Our plant uses chlorine dioxide and polymers to treat water prior to filtration. The water then passes through granular activated carbon to remove remaining impurities before pH adjustment and the addition of a small amount of chlorine for disinfection.

Most of Novato's water supply was purchased as treated water from Sonoma County Water Agency (SCWA). The SCWA water supply is collected from gravel beds 80 feet below and adjacent to the Russian River. The quality of this naturally-filtered water is excellent, making additional treatment unnecessary. Water from additional wells in the Santa Rosa plain can be blended with the Russian River well water to augment water supply. Before sending the water to us, small amounts of chlorine and sodium hydroxide are added to ensure purity and to adjust pH.

The Stafford water supply blends with the SCWA water supply in the distribution system. The percentage from each source can vary during the day.

Source Water Assessment

An assessment of watershed activities, which may affect the Stafford Lake source of supply, was performed in 2002 as required by the U.S. Environmental Protection Agency. The watershed activities identified with the highest potential for contamination of Stafford Lake are animal feeding/waste disposal at the existing stable and dairy operations on the watershed. These activities increase the potential to introduce microbial contaminants and nutrients to Stafford Lake. NMWD actively works with the stable and dairy owners to control their operations and reduce potential contaminants. The Stafford Lake source water is routinely monitored by NMWD to insure the controls are effective.

A copy of the complete assessment is on file at the North Marin Water District office at 999 Rush Creek Place, Novato.

CRYPTOSPORIDIUM & GIARDIA

In 2006, NMWD monitored the Stafford source water for *cryptosporidium* and *giardia,* which are microbial pathogens found in surface water. Filtration can remove *cryptosporidium* but cannot guarantee 100 percent removal. Chlorine disinfection kills *giardia.* Samples of untreated Stafford Lake water were taken for the first three months of 2006, and two *cryptosporidium* and four *giardia* were found. **Should you be concerned?** Healthy individuals should not be concerned. However, immuno-compromised people are at a greater risk. We suggest immuno-compromised individuals to consult their physician regarding appropriate precautions.

NOTICE TO PATIENTS UNDERGOING KIDNEY DIALYSIS

In August 2006, we began using chlorine dioxide as a pre-oxidant in water produced from the new Stafford Lake Water Treatment Plant. Customers undergoing kidney dialysis treatment are advised to use sufficient pre-treatment to ensure chlorine dioxide does not pose a threat to the dialysis process.

Your water meets all federal and state drinking water standards. This brochure is a snapshot of water quality monitoring performed in **2008**. Included are details about where your water comes from, what it contains, and how it compares to state standards. If you have any questions regarding this Water Quality Report, contact **Pablo Ramudo,** Water Quality Supervisor, (415) 897-4133 or (800) 464-6693.

This report is also available on our website at **www.nmwd.com**

Frequently-Asked Questions

- **Is my water fluoridated?**
  No, your water is not fluoridated; however, trace amounts of naturally-occurring fluoride are present in the water. Consult your dentist or pediatrician about your children's fluoride needs.
- **What is the hardness of my water?**
  Your water is considered moderately hard. Some appliance manuals refer to hardness in grains per gallon. Your water hardness ranges from 5.0 to 6.5 grains per gallon (hard water exceeds 8.8 grains per gallon).
- **Is tap water as good as bottled water?**
  NMWD's tap water is better than bottled water! We meet or exceed federal and state standards for tap water, which are stricter than standards for bottled water. If you taste chlorine in your drinking water, store a bottle overnight in your refrigerator and the taste/odor dissipates. NMWD offers attractive glass bottles for this purpose. Start enjoying the luxury of great-tasting water delivered to your home 24 hours a day!
- **What is NMWD doing in response to global warming?**
  Water Pumping is responsible for the largest use of electricity in California. The district has adopted policies and procedures to help reduce our electricity demand-including using more efficient pumps and pumping at night. You can help by conserving water, this will decrease the amount of time our pumps must operate.

  NMWD is investigating the use of solar panels that will produce electricity to power our facilities and reduce our dependence on fossil fuels. Also in 2006, the electric Stafford Lake aeration system was replaced with solar-powered mixers called Solar Bees.

Board of Directors

Dennis Rodoni, President
Jack Baker, Vice President
Rick Fraites
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The Board of Directors meets on the first and third Tuesday of the month, 7:30 p.m. at NMWD Administrative office, 999 Rush Creek Place, Novato, CA 94945.

Table 1	Report on Detected Constituents with a Primary Drinking Water Standard (PDWS)				SONOMA COUNTY WATER AGENCY		STAFFORD WATER TREATMENT PLANT	
CONSTITUENT	**UNITS**	**PHG / [MRDL] (MCLG)**	**MCL / [MRDL] (PDWS)**	**TYPICAL SOURCE**	**Average**	**Range**	**Average**	**Range**
Fluoride	**mg/l**	**1.0**	**2.0**	**Erosion of natural deposits**	**0.14**	**0.12 — 0.20**	ND	ND — **0.15**
Nitrate (as N)	mg/l	10	10	Soil runoff from fertilizers, leaching from septic systems and sewage	ND	ND	ND	ND
Radioactivity Gross Alpha	**pCi/l**	**0**	**15**	**Erosion of natural deposits**	**0.33**	**ND — 1.19**	**ND**	**ND — 1.58**
					(2008 data)		**(2001 — 2003 data)**	
DISTRIBUTION SYSTEM WATER								
Chlorine, Free	mg/l	[4.0]	[4.0]	Drinking water disinfectant added for treatment	Average = 0.13 Range = ND — 1.12			
Total Coliform Bacteria	**% of samples positive**	**0**	**>5.0% of monthly samples positive**	**Naturally present in the environment**	**Highest monthly percentage: 1.4% Range = 0 — 1.4%**			
Copper (2008 data) (1)	µg/l	170	(AL 1300)	Internal corrosion of household plumbing systems	30 samples, none above action level 90th Percentile = 64 Range = ND — 140			
Lead (2008 data) (1)	**µg/l**	**2**	**(AL 15)**	**Internal corrosion of household plumbing systems**	**30 samples, none above action level 90th Percentile = ND Range = ND**			
Total Trihalomethanes (2)	µg/l	n/a	80	By-product of drinking water disinfection	Highest annual average = 32 Range = 10 — 65			
Total Haloacetic Acids (2)	**µg/l**	**n/a**	**60**	**By-product of drinking water disinfection**	**Highest annual average = 6.2 Range = ND — 26**			

Table 2	Constituents With Aesthetic Concerns and/or a Secondary Drinking Water Standard			SONOMA COUNTY WATER AGENCY		STAFFORD WATER TREATMENT PLANT	
CONSTITUENT	**UNITS**	**SMCL**	**TYPICAL SOURCE**	**Average**	**Range**	**Average**	**Range**
Color	**units**	**15**	**Naturally-occurring organic materials**	**ND**	**ND**	**ND**	**ND — 2.5**
Odor	TON	3	Naturally-occurring organic materials	ND	ND — 2	ND	ND
Chloride	**mg/l**	**500**	**Runoff / leaching of natural deposits**	**11**	**7 — 20**	**34**	**34**
Sulfate	mg/l	500	Leaching of natural deposits, treatment chemicals	12	10 — 14	27	25 — 28
Turbidity	**NTU**	**5**	**Soil runoff**	**0.24**	**0.17 — 0.35**	**0.10**	**0.10 — 0.11**
Total Dissolved Solids	mg/l	1000	Runoff / leaching of natural deposits	190	170 — 200	190	150 — 220
Sodium	**mg/l**	**n/a**	**Naturally-occurring and treatment chemicals**	**20**	**19 — 21**	**26**	**22 — 29**
Hardness (3)	mg/l	n/a	Leaching of natural deposits	103	88 — 112	94	85 — 100
Radon	**pCi/l**	**n/a**	**See “Radon in Air,” back page**	**200**	**112 — 450**	**n/a**	**n/a**
Specific Conductance	µmhos/cm	1600	Substances that form ions in water	260	200 — 310	320	270 — 360
Manganese	µg/l	**50**	**Leaching from natural deposits**	**ND**	**ND**	**ND**	**ND**

(1) Regulations require sampling every three (3) years.
(2) Compliance is based on the four-quarter running average of distribution system samples.
(3) Hardness shown in mg/l equates to 5.0 to 6.5 grains per gallon.

LEGEND

PHG (Public Health Goal): 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.

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

MCL (Maximum Contaminant Level): 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 (**SMCL**) are set to protect the odor, taste, and appearance of drinking water. MCLs and SMCLs are set by the California and/or U.S. EPA.

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

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

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

NTU (Nephelometric Turbidity Units): A measure of suspended material in water.

90th Percentile: Compliance based on highest value after eliminating the highest 10% of values.

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 disinfectant added for water treatment below which there is no known or exposed risk to health. MRDLGs are set by the U.S. EPA.

Abbreviations

mg/l = milligrams per liter (parts per million)
µg/l = micrograms per liter (parts per billion)
µmhos/cm = micromhos per centimeter
ND = Not Detected
n/a = Not Applicable
pCi/l = picocuries per liter
TON = threshold odor number

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. North Marin Water District 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 www.epa.gov/safewater/lead.

Message from the United States Environmental Protection

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.

Contaminants that may be present in source water include:

- 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.

In order to ensure that tap water is safe to drink, the U.S. 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. DHS 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 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).

RADON IN AIR

Radon is a radioactive gas that can move from decomposed granite soils into a home through cracks and holes in the foundation. Radon can also get into indoor air when running tap water for showering and other household activities. In most cases, radon from tap water is a small source of radon in air. Radon is a known human carcinogen. It can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. The SCWA water was tested for Radon and showed an average of 200 and a range of 112—450 pCi/l (picocuries per liter). There is no federal regulation for radon levels in drinking water. Exposure over a long period of time to air transmitting radon may cause adverse health effects. If you are concerned about radon in your home, **test the air in your home!** Testing is inexpensive and easy. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

Este informe contiene información muy importante. Traduscalo o hable con algien que lo entienda bien. Para más información, llame al (415) 897-4133.

DRINKING WATER SOURCE ASSESSMENT FOR SCWA GROUNDWATER SUPPLY

In January 2001, a Drinking Water Source Assessment for all of the SCWA's water sources was conducted to identify if any potential sources of contamination exist.

The SCWA source water is extracted from groundwater via 15 separate wells located at Wohler and Mirabel and three wells in the Santa Rosa Plain. This aquifer is recharged by subsurface flows and Russian River water filtering down through the gravel riverbed.

Most of the SCWA water supply comes from wells at Wohler and Mirabel adjacent to the Russian River. These sources are considered to be most vulnerable from wastewater treatment and gravel mining in the area. However, no contaminants associates with these activities were detected in the drinking water.

The SCWA also operates three groundwater wells on the Santa Rosa Plain near Occidental Road, Todd Road and Sebastopol Road. These sources are considered to be most vulnerable from animal feeding operations. However, no contaminants associated with this activity were detected in the drinking water.

A copy of the complete assessment may be reviewed at the California Department of Health Services, Drinking Water Field Operations Branch, 50 D Street, Suite 200, Santa Rosa, CA 95404. You may request a summary of this assessment be sent to you by contacting the Office Representative at 707-576-2145 (voice) or 707-576-2722 (fax).