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# SANFORD WATER DISTRICT



## WATER QUALITY REPORT 2005

Sanford Water District  
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### ◆ Introduction

Last year, as in years past, the Sanford Water District strived to provide it's customers with high quality water. We are proud of the product that we provide to our customers, and hope this report helps to communicate the care we take in order to ensure the quality of your drinking water.

This annual report is an effort to better inform our customers about the quality of their water. It includes information on the location and source of the District's water supply, as well as a summary of the water quality results that showed detectable levels during 2005.

### ◆ The Source

The Sanford Water District has eight sources of water supply. All are groundwater sources that draw water from sand and gravel aquifers located in the town of Sanford. Each source has been delineated to show the area within the 200 day and 2,500 day travel times. These areas are shown in the Town of Sanford Zoning Ordinance (Sec. 16.1) which is available at the Water District. The District pumps an average of 2.5 million gallons of water a day to meet the water needs of the community.

#### **Main Pumping Station:**

Gravel Developed Wells located on River St.

#### **Cobb I Well:**

Gravel Pack Well located on Sanford High Blvd.

#### **Cobb II Well:**

Gravel Pack Well located on Sanford High Blvd.

#### **Country Club Road Well:**

Gravel Pack Well located on Country Club #2 Road

#### **Old Mill Road Well:**

Gravel Pack Well located on Old Mill Road

#### **Eagle Drive No. I Well:**

Gravel Pack Well located on Eagle Drive

#### **Eagle Drive No. II Well:**

Gravel Pack Well located on Eagle Drive

#### **New Dam Well:**

Gravel Pack Well located on New Dam Rd.

The Maine Department of Human Services Drinking Water Program completed an assessment of the water supply sources in 2003. The wells received a Moderate risk rating based on the well type and geology of the surfacial aquifers. Based on land use, water tests, land ownership and protection by zoning ordinances, the rating for the existing protection from contamination is Low to Moderate. The future risk is rated Moderate to High. Where feasible, the District should consider additional land or easement acquisition of properties near the wells to reduce the

future risk of contamination. The assessment is on file at the District office and Town office.

### ◆ About 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. 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 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.

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 EPA'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. EPA/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).

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## 💧 Radon

There is currently no federal regulation for radon levels in drinking water. The State of Maine currently recommends follow-up action (or treatment) for Radon levels in drinking water above 20,000 pCi/L. Radon is found in the soil and bedrock formations and is a by-product of Uranium. Only about 1-2 percent of Radon in air comes from drinking water. However breathing radon released to air from tap water increases the risk of lung cancer over the course of your lifetime. If you seek more information about Radon, please contact this office or the State Drinking Water Program and request a Radon 'Fact Sheet'.

## 💧 Iron

Iron is a common mineral that is found in groundwater throughout the Northeast, and Sanford is no exception. Iron in the water can at times tint the water a yellow or brown color. This is considered to be an esthetic (non-health related) problem.

To help minimize the build up of iron in the distribution system, the District flushes the system through the fire hydrants each year.

## 💧 Water Quality Testing

Extensive sampling programs are implemented by the District including the following:

- Weekly sampling of the distribution system for bacteria
- Quarterly sampling for several organic and inorganic parameters at our source water wells
- Continuous monitoring of pH levels at the source pumping stations
- Daily monitoring of fluoride, iron, and chlorine residual concentrations at the source pumping stations
- Specific sampling schedules for radon, copper, lead, and other parameters

## 💧 Questions

If you have any questions or concerns pertaining to this pamphlet or anything else to do with the quality of your water, please call the Sanford Water District office at 324-2312, or we can be reached by e-mail at: [information@sanfordwater.org](mailto:information@sanfordwater.org).

The Sanford Water District is located at 243 River Street in Springvale, a quarter of a mile south of the intersection of Pleasant Street. Our office hours are Monday through Friday 8:00 AM to 4:30 PM.

## Detected Contaminants\*\*

Substance	SWD Highest Detected	SWD Range Detected	Units	Highest Allowed (MCL)	EPA Goal (MCLG)	Possible Source
<b>Microbiological</b>						
Total Coliform Bacteria	3	0 to 3	Positive	1	0	Naturally present in the environment
<b>Radionuclides</b>						
Radon (12/15/04)	2,352	743 to 2,352	pCi/l	20,000	N/A	Naturally present in gravel and bedrock
Radium 228 (6/3/03)	1.64	0.64 to 1.64	pCi/l	5	0	Naturally present in gravel and bedrock
Gross Alpha (11/20/02)	3.58	0 to 3.58	pCi/l	15	0	Naturally present in gravel and bedrock
<b>Inorganic Chemicals</b>						
Arsenic	1.1	0 to 1.1	ug/l	10	0	Erosion of natural deposits
Barium	0.017	0.0017 to 0.017	mg/l	2	2	Erosion of natural deposits
Selenium	0.001	0 to 0.001	mg/l	50	50	Erosion of natural deposits
Chromium	1.8	0 to 1.8	ug/l	100	100	Erosion of natural deposits
Fluoride*	1.57	1.04 to 1.57	mg/l	4	4	Added for dental protection
Nitrate Nitrogen	1.05	0 to 1.05	mg/l	10	10	Runoff from fertilizer use
* Fluoride Average 1.34						
<b>Organic Chemicals</b>						
1,1,1-Trichloroethane	0.58	0 to 0.58	ug/l	200	200	Metal degreaser and factory discharge
Trichloroethylene	0.71	0 to 0.71	ug/l	5	0	Metal degreaser and factory discharge
MTBE	9.5	0 to 9.5	ug/l	35	35	Reformulated Gasoline Additive
<b>Annual Running Average*</b>						
Total Trihalomethanes	4.9		ug/l	80	0	By-product of chlorination
* Annual Running Average: The average of all monthly or quarterly samples for the last year at all sample locations						

## Lead & Copper

	SWD 90%	Number of Samples Over Action Level	Units	Action Level*	MCLG	
Lead	7	1	ug/l	15	0	Corrosion of household plumbing
Copper	0.3	0	mg/l	1.3	1.3	Corrosion of household plumbing

\*Action Level - 90% of samples must be below this level (a total of 31 samples were taken)

**\*\*Note: The EPA requires monitoring of many drinking water contaminants. Those listed above are the only contaminants detected in your drinking water.**

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**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 allow for a margin of safety.

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

**ug/l:** micrograms per liter (parts of contaminant per billion parts of water)

**mg/l:** milligrams per liter (parts of contaminant per million parts of water)

**pCi/l:** picocuries per liter, a measure of radioactivity

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data reviewed for this report, though representative, is more than one year old (dates are noted in these cases). The District conducts sampling programs for over 80 contaminants.

## 💧 Treatment

In general, the water supplied by the District is not disinfected. However, sodium hypochlorite (bleach) is added at two of the sources to create a residual as the water enters the system. Fluorosilicic acid is added to all source water to promote dental health. Sodium hydroxide is added to all sources to produce a less corrosive water with a higher pH level. Hexametaphosphate is added at the Main Station to reduce discoloration caused by iron and manganese.

## 💧 Coliform Bacteria

In August 2005, coliform bacteria was detected in 1 of the 25 monthly samples taken from the system. Additional sampling determined that coliform bacteria was present in the distribution system and in the Grammar Road water storage tank. With guidance from the State Drinking Water Program, hypochlorite was added to the Grammar Road tank and at the pumping stations to create a chlorine residual in the distribution system. Public notification was posted or distributed to all concerned residents. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

As per the requirements of the State drinking water regulations, the District conducted a total coliform bacteria study and inspection of the system by an engineering firm (Wright-Pierce, Inc) during 2005. This resulted in renovations at the Main Station to eliminate the clearwell tank by installing submersible pumps and new wells. This also resulted in replacing the hatch and repairing leaks at the Hanson Ridge Tank. The study concluded that the source water does not have coliform bacteria. However, some bacteria is formed over time in the distribution system and storage tanks. The district is currently adding hypochlorite at selected sites to create chlorine residuals for disinfection.

## 💧 Public Meetings

The Trustees of the Sanford Water District hold monthly meetings on the second Tuesday of the month at 7:00pm. Anyone interested in attending should call the District at 324-2312 for the date and time of the next meeting.