DEAR CUSTOMER:

The 1996 amendments to the SAFE DRINKING WATER ACT requires public water systems to provide annual Water Quality Reports to their customers. Please review carefully and feel free to ask questions.

RWD Commissioners

12th Annual

Rye Water District's

WATER QUALITY REPORT

June 2010

Let's Make Every Drop Count

Ways to Protect and Conserve Groundwater

1. Dispose of chemicals properly.
2. Take used motor oil to a recycling center.
3. Limit amounts of fertilizer.
4. Take short showers.
5. Shut off water while brushing your teeth and shaving.
6. Run only full loads of dishes and laundry.
7. Check for leaky faucets and have them fixed.
8. Water outside only when necessary and before 9 am or after 6 pm.
9. Keep a pitcher of drinking water in the refrigerator.

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Water Quality Report – 2010

What is the source of my drinking water?
The Rye Water District obtains its water from three wells. Two wells are deep-drilled bedrock wells capable of providing approximately 300 gallons per minute (GPM). The third well is a gravel-packed well capable of providing approximately 400 GPM. The water you receive is a blend of these wells.

How can I get involved?
If you have any questions regarding this report, please call Ken Aspen, Superintendent, or Patricia Goodale, Business Manager, at the District Office at 436-2596. You are also invited to attend our monthly meetings held on the first Wednesday of each month at 9:00 am at the District Office at 60 Sagamore Road. Additionally, the Commissioners conduct weekly work sessions on most other Wednesdays also at 9:00 am at the District Office. All meetings are open to the public. Please call to confirm meeting dates and times.

Why are contaminants in my water?
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of 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 US Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Do I need to take special precautions?
Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 for 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).

Definitions:

MCLG: Maximum Contaminant Level Goal or 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.

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

AL: Action Level or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

MRDLG: Maximum Residual Disinfectant Level Goal or the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants (for water systems that use chlorine).

MRDL: Maximum Residual Disinfectant Level or the highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants (for water systems that use chlorine)..

Abbreviations:

ppm: parts per million **ppb**: parts per billion **ppt**: parts per trillion **ppq**: parts per quadrillion **pCi/L**: pico curies per liter **NTU:** Nephelometric Turbidy Unit
NA – Not Applicable **nd**: not detectable at testing limits **AL**: Action Level **TT**: Treatment Technique

Sample Dates:
The results for detected contaminants listed below are from the most recent monitoring done in compliance with regulations ending with the year 2009. Results reported prior to 2009 include the date the sample was taken. The State of New Hampshire allows water systems to monitor for some contaminants less than once per year, because the concentrations of these contaminants do not change frequently. Thus some of the data present, though representative, may be more than one year old.

Turbidity:
A measure of the cloudiness of the water. Surface water systems are monitored for it, because it is a good indicator of water quality, and thus helps measure the effectiveness of the treatment process. High turbidity can hinder the effectiveness of disinfectants.

DETECTED WATER QUALITY RESULTS						
Contaminant (Units)	**Level Detected**	**MCL**	**MCLG**	**Violation YES/NO**	**Likely Source of Contamination**	**Health Effects of Contaminant**
Microbiological Contaminants						
Total Coliform Bacteria	None (2009) Positive (2008)	< 40 samples >1 is positive	0	NO	Naturally present in the environment	Coliforms are bacteria that are naturally present 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.
Inorganic Contaminants						
Arsenic (ppb)	1 (B)* (2007)	10	0	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic (5 ppb through 10 ppb). EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Some people who drink water containing arsenic in excess of the MCL (above 10 ppm) over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.
Barium (ppm)	14 (B)* 12 (G)* (2007) 14 (C)* (2006)	2	2	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Copper (ppm)	.96 .78 (2005)	AL=1.3	1.3	NO	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Fluoride (ppm)	0.23 (C)* (2008) 0.26 (B)* (2007) 0.21 (C)* (2006)	4	4	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Lead (ppb)	Number of samples above the AL of 15 ppb were 1 of 20 (2005)	AL=15	0	NO	Corrosion of household plumbing systems, erosion of natural deposits	(15 ppb in more than 5%) 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). (above 15 ppb) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Nitrate (as Nitrogen) (ppm)	2.3 (G)* 2.4 (G)* (2008) 2.6 (G)* (2007)	10	10	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	(5 ppm through 10ppm) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. 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. (Above 10 ppm) Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill; and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Volatile Organic Contaminants						
Methyl tertiary-butyl ether (MTBE) (ppb)	0.6 (G)* (2006)	13	13	NO	A gasoline additive	The New Hampshire Bureau of Health Risk Assessment considers MTBE a possible human carcinogen.

* B = Bailey Brook Well
C = Cedar Run Well
G = Garland Well

Description of Drinking Water Contaminants:

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 storm water 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 storm water 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 storm water 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 EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The United States Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Radon: Radon is a radioactive gas that you can't see, taste, or smell. It can move up through the ground and into a home through cracks and holes in the foundation. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. It is a known human carcinogen. Breathing radon can lead to lung cancer. Drinking water containing radon may cause an increased risk of stomach cancer. Presently the EPA is reviewing a standard for radon in water.

Lead: 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. This water system is responsible for high quality drinking water, but can not control the variety of materials used in your plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing cold water from your tap for at least 30 seconds before using water for drinking or cooking. Do not use hot water for drinking and 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.

Source Water Assessment Summary:

The NH Department of Environmental Services has prepared a Source Water Assessment Report for the source(s) serving this community water system, assessing the sources' vulnerability to contamination. The results of the assessment, prepared on 5/2/2002 and 11/12/2004 are as follows:

Garland Well received three (3) high susceptibility ratings, four (4) medium susceptibility ratings, and five (5) low susceptibility ratings.
Bailey Brook Well received one (1) high susceptibility ratings, four (4) medium susceptibility ratings, and seven (7) low susceptibility ratings.
Cedar Run Well received one (1) high susceptibility ratings, four (4) medium susceptibility ratings, and seven (7) low susceptibility ratings.

The complete Assessment Report is available for review at the Rye Water District, 60 Sagamore Road, Rye, New Hampshire. For more information call Patricia at the District at 436-2596, or visit NH Department of Environmental Services, Drinking Water and Groundwater Bureau, web site at http://des.nh.gov/organization/divisions/water/dwgb/index.htm.