

CITY OF EVERSON WATER QUALITY REPORT FOR 2005

This report is designed to inform our consumers about the quality of our drinking water. Included in this report are details about where our water comes from, how it is treated and protected, and how it compares to the Environmental Protection Agency (EPA) and Washington Department of Health (DOH) standards. For more information about our water, check with Everson City Hall at 111 W. Main street, or phone: 360-966-3411. Our city council meets on the second and fourth Tuesdays of each month at 7:30 P.M. at the Everson Senior Center.

Our water comes from the Strandell Well field, located about $\frac{3}{4}$ miles southwest of downtown Everson. We have three wells that draw from the Well field; wells #4, #5, and #6. Well #6 draws from a deeper aquifer (156 ft.). Because of a high manganese concentration in that lower aquifer, well #6 is only used in case of an emergency demand such as a fire or failures of wells #4 & #5, which currently supply all our water. Wells #4 & #5 draw from a shallow, unconfined aquifer underlain by glacial sand and gravel. The water in the aquifer flows in a northerly direction toward the well field.

Our plans are to install manganese removal on the deep well as soon as possible and use it as our primary source. This will more than double our water supply, besides drawing from a more protected aquifer. This may have to happen sooner than later, because of two **water quality** issues, other than manganese: **(1.) Increasing nitrates** in the shallow aquifer. **(2.) Sand** developing in well #4. We have been forced to significantly reduce the pumping rate of well #4 to minimize pumping sand into the distribution system. This is of major concern to us.

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.

The sources of drinking water (both tap 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

In order to insure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

THERE ARE SEVEN BASIC CATEGORIES OF CONTAMINANTS WE ARE REQUIRED TO TEST FOR:

- 1. Microbial Contaminates**, such as viruses and bacteria which may come from either human or animal waste.
Frequency: once per month from 3 different alternating locations in the water system. This test is called the coliform bacteria test, and is currently performed by Avocet Lab in Bellingham.
- 2. Inorganic Contaminates**, such as salts and metals. These can be naturally occurring, or result from stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
Frequency: every three years, from the city wells (except Nitrate, which we have to test for four times per year now).
14 primaries contaminants are tested: Antimony, Arsenic, & Asbestos are a few of these 14 contaminants.
- 3. Lead/Copper:** This test is directed at homes with copper plumbing and/or lead service lines. We have no lead services, but there are numerous copper-plumbed homes. Every three years we are required to test a selected group of 10 houses with copper plumbing. These tests indicate corrosivity of water. Corrosive water dissolves lead and copper.
- 4. Synthetic Organic Contaminates, including pesticides and herbicides**, which may come from a variety of sources, such as agricultural and residential uses. *Frequency:* every three years from the city wells.
20 contaminants are tested for. A few examples are: 2,4-D; Chlordane, Dinoseb, Atrazine, Simazine, and Lindane. We have never detected any of these contaminants thus far in our testing.
- 5. Radioactive contaminants**, which are naturally occurring. We specifically test for Beta/Photon and Alpha emitters.
- 6. Volatile Organic 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. *Frequency:* Every three years from the city wells.
22 contaminants are tested for. Some examples are: Benzene, Toulene, Trichoroethylene.
Thus far, we have never detected any of these contaminants for categories #4, #5, or #6.
- 7. Disinfectant by-products from chlorine**, which, if present, can be found at the end of long dead end water mains. The two byproducts we test for are Total Trihalomethanes (TTHM), and Haloacetic Acids (HAA). Our first round of testing was done in 2005, indicating a miniscule amount of each, which is shown on 2005 CCR.

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In 2005 the City of Everson water department tested well #6 for Nitrate-N with none detected. We tested 4 times for Nitrates from wells #4 & #5. We tested monthly for manganese from wells #4 & #5 plus the distribution system. We tested monthly for coliform bacteria at three rotating places in the system, and had no detects. We tested for Lead/copper from 9 selected houses, which is required every three years. Primary contaminates results are shown below.

For about 12 years we have been experiencing increasing manganese levels in wells #4 and #5, and the last few years an increase in nitrate levels. Manganese is a *secondary* contaminant, and is not a health threat, but can be a nuisance, coating pipes and sometimes dishwashers and toilet tanks with a dark color. It is sometimes seen as very small black specs that come from flaking off the insides of pipes that become coated with a film of manganese. We flush all the water mains twice a year (at least) in an effort to minimize the problem. Flushing also helps prevent any bacterial problems.

Nitrates is a *primary* contaminate, and concentrations greater than the MCL (10 mg/L) in drinking water has been linked to possible serious illness and even death in extreme circumstances in infants under 6 months of age. The Nitrate levels in wells #4 and #5 have been averaging between 5 and 6 ppm for the past two years. This is up from around 3 ppm 12 years ago. Anything above 5 ppm triggers a mandatory sampling of 4 times per year. Tests on the deep well have shown no detection of nitrates, or any other contaminants other than manganese.

We continue to strongly recommend that **air expansion tanks** be installed in the cold water supply lines just ahead of water heaters, if not already installed. This alleviates *thermal expansion* caused by your hot water tank, which can cause thermal pressure relief valves to leak, and even cause dangerous high pressure situations. Also please be sure your relief valve is installed and in good working condition.

We are still in the early stages of developing a cross connection control program.

WATER QUALITY DATA

The table below lists the **primary** drinking water contaminates we **detected** during 2005.

TERMS AND ABBREVIATIONS USED BELOW:

Maximum Contaminant Level (MCL): the highest level of a contaminant that is allowed in drinking water. MCL's are set as close as is feasible using the best available treatment technology. **Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. **N/A:** not applicable **ND:** Not detectable at testing limit **ppb:** parts per billion, or micrograms per liter **ppm:** parts per million, or milligrams per liter **pCi/L:** picocuries per liter (a measure of radiation) **millirems per year (mrem/yr):** a measure of radiation absorbed by the human body. **Million fibers per liter (MFL):** a measure of the presence of asbestos fibers longer than 10 micrometers.

Primary Contaminants	Violation Y/N	Level Detected	Unit Measurement	AL	MCL	Likely source of contamination
Nitrate	N	5.5 (Avg)	PPM		10	Runoff from fertilizer, leaching from septic systems
Dissolved Lead	N	.001	PPM	.015		Corrosive water & lead in house fixtures
Dissolved Copper	N	.145	PPM	1.3		Corrosive water & copper in house fixtures
Total Trihalomethanes (THHM)	N	6	ug/L		80	Disinfectant (Chlorine) Byproducts
Haloacetic Acid (HAA)	N	1.6	ug/L		60	Disinfectant (Chlorine) Byproducts

Thank you for taking the time to read this report. We ask that our customers help us protect our valuable water resources, which are the heart of the community, our way of life, and our children's future. We would also encourage all our water customers to conserve water usage by installing water-saving devices, eliminating leaks, and being prudent in outside water use.

This report is bulk-mailed to all 98247 Zip code residents for reasons of simplicity and cost reduction. You may or may not be on the City of Everson Water system. Our water system serves all residents within the city limits of Everson, as well as the Everson Water Association, Hampton Water Association, and Emerson Road association as far south as and including the Percy Hoekema farm.

Respectfully submitted,

Dennis Shaw, Water Superintendent

Date completed: February 23, 2006