

CITY OF EVERSON WATER QUALITY REPORT FOR 2004

This report is designed to inform our consumers about the quality of our water and services. 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. This report was prepared by Dennis Shaw, Water Superintendent. For more information about our water, check with Everson City Hall at 111 W main, 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 ¾ 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.), and because of a high manganese concentration in that lower aquifer, is only used in case the other two wells cannot keep up with the demand in an emergency such as a fire. Wells #4 & #5 currently supply all our water. They 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 being a more protected aquifer. This may have to happen sooner than later, as the nitrate levels are increasing in our shallow wells. This is explained in more detail on page two.

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 FIVE 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, a certified Lab in Bellingham.
- 2. Inorganic Contaminates**, such as salts and metals, which 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 contaminates tested: Antimony, Arsenic, Asbestos, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Mercury, Nitrate, Nitrite, Selenium, and Thall
- 3. Lead/Copper:** This test is directed at homes with copper plumbing and/or lead service lines. We have no lead Services, but numerous copper-plumbed homes. We are required to test a selected group of 10 houses with copper plumbing every three years. These tests indicate corrosivity of the water. Corrosive water dissolves lead and copper. Our first round of tests showed no problem in lead, but the dissolved copper was above the acceptable (action) limit. We subsequently upgraded our water system to include two new aerated storage tanks, which raised the pH significantly. In our subsequent rounds of testing the dissolved copper has been far below the action level.
- 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 contaminates are tested for. A few examples are: 2,4-D; Chlordane, Dinoseb, Atrazine, Simazine, Lindane. We have never detected any of these contaminates thus far in our testing.
- 5. Radioactive contaminates**, which are naturally occurring. We specifically test for Beta/Photon and Alpha emitters.
- 6. Volatile Organic contaminates, 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 contaminates are tested for. Some examples are: Benzene, Toulene, Trichoroethylene.
Thus far, we have never detected any of the contaminates for categories #4, #5, or #6.

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In 2004 the City of Everson water department tested wells #4, #5, & #6 for Radium 228, and #4 & #5 for EDB and other soil fumigants. Well #6 was also tested for Volatile Organic Contaminants. We found no detectable contaminants on any of the above. We tested 4 times for Nitrates. We also tested monthly for manganese from wells 4 & 5 plus the distribution system. The results are shown below. The nitrates and manganese have increased over a period of years, causing a close watch on our part. We also tested monthly for coliform bacteria at three rotating places in the system, and had no detects.

For about ten 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 10 years ago. Anything above 5 ppm triggers a mandatory sampling of 4 times per year. For several years we have been alarmingly close to our limits on water *production* in the summer months. It appears to be only a matter of time before we will be forced to discontinue wells #4 and #5 as our primary sources, and install manganese treatment on the deep well as our primary source. Tests on the deep well have shown no detection of nitrates, or any other contaminants other than manganese. Our water production will more than double with the ability to use the deep well as our primary source. It draws from a lower protected aquifer, which is quite extensive.

We continue to strongly recommend **air expansion tanks** be installed in the cold water supply lines just before water heaters if they are not already installed. This alleviates *thermal expansion*, 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 2003.

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

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: March 4, 2005