2011 WATER QUALITY REPORT

Water quality reports are to inform you, the consumer, about water quality, characteristics, and treatment procedures of the City of Woodland's drinking water. This annual publication complies with Federal law requiring all water utilities to provide water quality information to customers each year and is provided in addition to other notices required by law.

This report includes mandatory information regulated by State Department of Health (DOH) as well as the Environmental Protection Agency (EPA), and also facts and details unique to the City of Woodland's water system. We support the consumer's right to know the results of our water quality monitoring and encourage public participation in decisions which affect your drinking water. More extensive information of water quality testing results is available at the Public Works Department Office at 300 East Scott Avenue.

The State-regulating agency is the Department of Health (DOH) and the Federal agency is the Environmental Protection Agency (EPA). Our water is monitored and tested daily by certified water treatment personnel and also regularly tested through certified laboratories. DOH and EPA regulators routinely monitor our compliance and testing procedures to *ensure* safe delivery of water to our customers.

Woodland's water meets or exceeds EPA water quality requirements!

Security and emergency response are essential in proper management of our drinking water system. We have complied with the required system vulnerability assessment and have submitted an emergency water system response plan to the Environmental Protection Agency (EPA).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems disorders, and 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 and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at (800) 426-4791 or on the web at *http://www.epa.gov/safewater*.

SOURCE AND TREATMENT OF WOODLAND'S WATER

The source of Woodland's water supply is the aquifer beneath the North Fork of the Lewis River. The water collection system, called a *Ranney well*, is located below the river bottom and is relatively safe from any potential contamination or flooding damage which may take place in the river. The Lewis River watershed is fed by glacier melt from Mt. Adams and smaller tributaries such as Cedar Creek. The Lewis River is one of the cleanest and most pristine rivers in the region; however, the source is naturally high in iron.

The City of Woodland Water Filtration Plant began operation in late May of 1999. The filtration plant uses chlorine for disinfection and to remove iron. Soda ash is also used in the iron removal process, as well as for corrosion control in the distribution system. Fluoride is added for strengthening and enhancement of teeth. Filter aid coagulants and positive charge polymers are also used in the treatment process for coagulation (the process causes smaller particles to attract to one another to form larger particles, which are then trapped on the filter surface). The treatment plant is designed for a 24-hour peak flow of 3,000,000 gallons per day (3 MGD). In addition to iron removal, the treatment process also reduces turbidity, color, and disinfects potential contaminants which may include the following:

- Microbial contaminants, such as viruses, bacteria, giardia, and cryptosporidium, which may come from wildlife.
- Inorganic contaminants, such as salts and metals, which can occur in nature.
- Pesticides and herbicides, which may come from a variety of sources such as farming, home or business use, and storm water runoff.
- Radioactive contaminants which can occur naturally.
- Organic chemical contaminants, including synthetic and volatile organic chemicals which are by-products of industrial processes, solvents, petroleum production, or from gas stations, storm water runoff and septic systems.

WATER USE EFFICIENCY RULE

Municipal water systems have recently become subject to the "Water Use Efficiency Rule", effective January 22, 2007. Along with several other requirements, this rule requires distribution system leakage be reduced to 10% or less. The City of Woodland estimates that their amount of lost and unaccounted for water for the last 6 months of 2011 was 6.9%. The City staff continues to keep unaccounted for water as small as possible. Additionally, we request the public's assistance in reporting to the Public Works office, (360)-225-7999, any known leaks or other un-metered losses from our drinking water system.

WATER QUALITY MONITORING RESULTS

The EPA requires that public water systems report on contaminants detected in their water supply. Woodland monitors over 150 of these. In addition, the City also collects samples from consumer taps to monitor for chlorine, coliform, lead and copper. We also collect samples at our reservoirs, distribution system, and at the source. All detected contaminants were below Environmental Protection Agency (EPA) maximum contaminant levels (MCL).

Parameter	Year of Test	Result	MCL	In Compliance	Comments
Nitrate	2011	0.22 mg/L	10 mg/L	YES	
Lead	2009	.006 mg/L	.015 mg/L	YES	90th percentile values.
Copper	2009	1.0 mg/L	1.3 mg/L	YES	90th percentile values.
HAA5	2011	8.5 ug/L	60 ug/L	YES	Average of quarterly test results.
THM	2011	15.8 ug/L	80 ug/L	YES	Average of quarterly test results.
Radium 228	2010	0.8 pCi/L	5 pCi/L	YES	

- All 95 coliform bacteria tests in 2011 met EPA standards.
- No SOC's were detected in 2009, from 24-tested.
- No VOC's were detected in 2008, from 57 tested.
- 15 inorganic chemicals were tested and not detected in 2007.

Definitions & Abbreviations

Synthetic Organic Compounds (SOCS): A class of man-made contaminants including herbicides, pesticides, and other chemicals that come from agriculture, urban storm water runoff, or industrial activities.

Volatile Organic Compounds (VOCS): Chemical solvents or cleaners (and their byproducts) that are derived from petroleum products; man-made contaminants from industrial processes.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

mg/L (Milligrams per liter): Approximately equal to parts per million (PPM) or 1 milliliter per 1,000 liters of water.

ug/L (Micrograms per liter): Approximately equal to parts per billion (PPB) or 1 milliliter per 1,000,000 liters of water.

pCi/L (Picocuries per liter): A measure of radioactivity.

Disinfection Byproducts (DBP, THM, & HAA5)

The disinfection of drinking water is one of the major public health advances of the past century. One hundred years ago typhoid and cholera epidemics were common throughout American cities. Disinfection was a major factor in reducing epidemics, and it is an essential part of drinking water treatment. However, disinfectants themselves can react with naturally occurring materials in the water to form unintended organic and inorganic byproducts which may pose health risks. A major challenge for water suppliers is how to balance the risks from microbial pathogens and disinfection byproducts. It is important to provide protection from these microbial pathogens while insuring decreasing health risks to the population from disinfection byproducts (DBP's). The most common DBP's formed when chlorine is used are trihalomethanes (THM's), and haloacetic acids (HAA5's).

CROSS-CONNECTION / BACKFLOW PREVENTION

What is a cross-connection? A cross-connection, as defined by the Washington Administration Code, is "any actual or potential physical connection between a public water system or the consumer's water system and any source of non-potable liquid, solid, or gas that could contaminate the potable (drinking) water supply by backflow."

What is my responsibility as a consumer? As property and business owners, it is your responsibility to eliminate cross-connections that pose a potential health hazard by ensuring proper installation of a backflow prevention assembly.

What is a Backflow Prevention Assembly? A backflow prevention is a device that is installed somewhere in the consumer's water system that prevents contamination from entering the potable water supply. These devices are normally required and found on fire suppression systems and in-ground irrigation systems.

WATER CONSERVATION

It's only a small drip....

Slow drips of water can add up quickly. A toilet that "keeps running" after you flush or a sink that drips after it is turned off can waste thousands of gallons of water a year. If the drip is hot water, you are paying for wasted energy too.

Leaky Faucets

A faucet is frequently the result of a bad washer. The washer on a sink is typically located under the handle and relatively easy to replace. It does require that you shut off the water under the faucet. Check with local hardware store or home centers. If you don't feel comfortable making the repair yourself, a plumber may be your best option. Remember, even if you have to pay a plumber to fix the leak, you will end up saving money in the long run.

Toilet Leaks

Toilet leaks can range from small to large, constant to random. Many are even silent. Even a small, silent leak can easily cost $100 per year in water and sewer costs. Fortunately, most toilet leaks are relatively easy to fix. If you have a leak there are a number of possible causes. Toilet repair kits with instructions are available at hardware stores and home centers.

QUESTIONS? Contact Woodland Public Works at (360) 225-7999.