Water Quality Report

TOWN OF COUPEVILLE

ID# 155509 **June 2013**

ANNUAL REPORT FOR 2012

We're pleased to present the Annual Water Quality Report for 2012. This publication conforms to the federal regulation requiring water utilities to provide water quality information annually and is designed to educate and inform you about the water quality and services we deliver to you every day. We believe this information provides a valuable service to you and confirms our commitment to provide quality water for all our customers.

This report contains technical information to help you understand what is in your water and what isn't.

Your drinking water is highly regulated by Washington State Department of Health (DOH) and US Environmental Protection Agency (EPA) and is tested regularly. Because our constant goal is to provide you with a safe source of drinking water, we hope you will find this consumer report interesting and informative.

SOURCE OF WATER

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and aquifers.

The water for Coupeville comes from aquifers, which supply two wells in town and six wells out of town within the Fort Casey well field located 4.1 miles south east of town. For the year 2012, 85% of the Town's water came from the Fort Casey well field.

Well water is treated at the Ft. Casey Water Treatment Plant for removal of iron (Fe) and manganese (Mn), components often found in Whidbey Island source waters. It is then chlorinated before entering the Town's distribution system. Water coming from the in-town wells is chlorinated at the In-town Water Treatment Plant prior to entering the distribution system.

The entire treatment process is regularly monitored through daily routine testing at both water treatment plants. Other tests are conducted at contracted laboratories.

All drinking water, including bottled water, contains minute amounts of some contaminants. Their presence does not necessarily indicate that the water poses a health risk.

Potential contaminants and their sources include:

- *Microbial contaminants, such as viruses/bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*
- *Inorganic contaminants, such as salts and metals, which are naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, mining, or farming.*
- *Organic contaminants, which are by-products of industrial processes and petroleum production, stormwater runoff, and septic systems.*
- *Radioactive contaminants, which can be naturally occurring.*

CONTACT INFORMATION

More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's (EPA) Safe Drinking Water Hotline: 1.800.426.4791**

Keeping pace with up-graded water testing and more stringent federal standards is a challenge, but one that the Town of Coupeville strongly supports. Because we are committed to keeping you informed about water issues, we encourage you to read this report. Each year we will update this report in response to changing federal requirements, so you may want to save it.

If you have questions or comments on this report or suggestions for future reports, please call or email

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2012 WATER QUALITY MONITORING RESULTS

The tables on the next page note each contaminant, units of measure and allowable levels, and show the levels found in Coupeville's source water. Typical sources for these contaminants are noted. Presence of certain contaminants does not necessarily pose a health risk.

Some tests are required annually while others are required less frequent. Data shown is the most recent available. Abbreviations and definitions are listed in this report to help you become more familiar with the terms used. The column titled "Met drinking water standards?" shows that your water meets all requirements.

The Town tests for more contaminants than are shown in this report. Contaminants that were below detection levels are not listed on the charts, only test results that yielded positive results are shown. (Except for bacteria results which are always shown.) Do you want to learn more? **Contact William LaRue, Public Works Director.**

The Coupeville Town Council meets monthly, the second and fourth Tuesdays of the month, at 6:30 p.m. in the Commissioner's Hearing Room of the County's Annex Building at 1 NE Sixth Street. Agendas are posted at the Post Office, Courthouse, and Town Hall.

SPECIFIC ISSUES

Some members of the population are more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those with cancer undergoing chemotherapy, people 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.

Guidance is available from the SAFE Drinking Water Hotline (1-800-426-4791), and on EPA's web site at www.epa.gov/safewater.

2012 WATER QUALITY REPORT

Water Quality Monitoring Results

WATER DISTRIBUTION SYSTEM - Bacteria and Disinfection Byproduct Results

Component	Test Date	Results	Units	MCLG	MCL	Met drinking water standards?	Typical Sources
Total Coliform Bacteria	Monthly	ND	NA	0	• 0	Yes	Coliforms are bacteria that are naturally present in the environment and are an indicator that other potentially harmful bacteria may be present.
Total Fecal Coliform Bacteria	Monthly	ND	NA	0	• 0	Yes	Human and animal fecal waste are potential sources for these bacteria.
Total Trihalomethanes	8/11/10	26.2	ppb	NA	80	Yes	Byproducts of drinking water chlorination.

WATER DISTRIBUTION SYSTEM - Asbestos Results

Component	Test Date	Results	Units	MCLG	MCL	Met drinking water standards?	Typical Sources
Asbestos	7/28/10	<0.13	mfl	7	7	Yes	Decay of asbestos cement water mains and/or erosion of natural deposits.

RESIDENTIAL WATER SOURCES - Lead and Copper

Component	Test Date	Results	Units	MCLG	MCL	Met drinking water standards?	Typical Sources
Lead (1) *	6/08/10	High = 0.033 Range = <0.033	ppb	0	15	Yes, 90th percentile reading is compliant.	Corrosion of household plumbing systems, erosion of natural deposits.
Copper (1) *	6/08/10	High = 1.2 Range = 0.013 - 1.20	ppm	1.3	1.3	Yes, 90th percentile reading is compliant.	Corrosion of copper plumbing; erosion of natural deposits; leaching from wood preservatives. See additional information on lead and copper in your drinking water at the end of this report.

"IN TOWN" SOURCE WELLS - Inorganic Compounds or IOC

Component	Test Date	Results	Units	MCLG	MCL	Met drinking water standards?	Typical Sources
Arsenic	10/19/11	0.011	ppb	NA	10	Yes	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	9/26/07	0.13	ppm	2	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	4/25/07	0.6	ppm	4	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories.
Nitrate - N	12/12/12	ND	ppm	10	10	Yes	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Total Dissolved Solids (TDS) (1)	4/30/08	580	ppm	NA	500	No (4)	Geologic; erosion of natural deposits.
Conductivity (2)	4/30/12	1010	Uho/cm	NA	700	No (4)	Erosion of natural deposits, or seawater.
Iron (3)	9/26/07	0.015	ppm	NA	0.3	Yes	Erosion of natural deposits.
Manganese (3)	4/7/10	0.13	ppm	NA	0.05	No	Erosion of natural deposits.
Chloride	12/31/12	82	ppm	NA	250	Yes	Erosion of natural deposits, or seawater.
Sulfate	9/26/07	28	ppm	NA	250	Yes	Erosion of natural deposits.
Sodium	9/26/07	51	ppm	NA	NA	NA	Erosion of natural deposits, or seawater.

FORT CASEY SOURCE WELLS - Inorganic Compounds or IOC

Component	Test Date	Results	Units	MCLG	MCL	Met drinking water standards?	Typical Sources
Arsenic	10/11/11	0.002	ppb	NA	10	Yes	Erosion of natural deposits. Runoff from orchards; runoff from glass & electronics production wastes.
Barium	4/7/10	0.067	ppm	2	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	4/7/10	<0.2	ppm	4	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories.
Nitrate – N	8/13/11	1.4	ppm	10	10	Yes	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Iron (3)	5/7/12	ND	ppm	NA	0.3	Yes	Erosion of natural deposits.
Manganese (3)	5/7/12	ND	ppm	NA	0.05	No (5)	Erosion of natural deposits.
Chloride	4/7/10	36	ppm	NA	250	Yes	Erosion of natural deposits, or seawater.
Sulfate	4/7/10	27	ppm	NA	250	Yes	Erosion of natural deposits.
Sodium	4/7/10	31	ppm	NA	NA	NA	Erosion of natural deposits, or seawater.
Hardness	4/7/10	300	ppm	NA	NA	NA	Erosion of natural deposits.
Conductivity (2)	5/7/12	660	Uhos/cm	NA	700	Yes	Erosion of natural deposits, or seawater.
Turbidity	4/7/10	0.3	NTU	NA	1	Yes	Combination of iron and manganese. Filter at treatment plant reduces the amount but does not remove all; this is the residual.
Color	4/7/10	10	Color units	NA	15	Yes	Combination of iron and manganese. Filter at treatment plant reduces the amount but does not remove all; this is the residual.
TDS (1)	4/7/10	430	ppm	NA	500	Yes	Geologic, erosion of natural deposits.
Other Testing (not required or regulated)							
Lead	4/7/10	<0.001	ppm	NA	0.015	Yes	Erosion of natural deposits.
Copper	4/7/10	0.006	ppm	NA	1.3	Yes	Erosion of natural deposits.

FORT CASEY SOURCE WELLS - Radionuclides

Component	Test Date	Results	Units	MCLG	MCL	Met drinking water standards?	Typical Sources
Gross Alpha	8/01/12	5.9	pCi/L	NA	15	Yes	Erosion of natural deposits.
Radium 228	8/01/12	0.1	pCi/L	NA	5	Yes	Erosion of natural deposits.

TABLE FOOTNOTES

Residential Water Sources - Lead and Copper Results:

* See "Lead & Copper and Your Drinking Water", left.
(1) Ten (10) representative samples taken through the system.
• See page 4 for MCL definition.
♦ See page 4 for MCL definition.

"In Town" & Fort Casey Source Wells - Inorganic Compounds or IOC:

(1) A TDS limit of 500 is desired in drinking water for reasons of palatability.
(2) Conductivity is a measure of an aqueous solution's ability to carry electric current.
(3) Secondary testing, EPA-regulated. There is no health risk associated with the presence of this component in your drinking water.
(4) Though this is state regulated, it is not a direct health issue. It is an indicator of the corrosiveness of the water, which may cause leaching of lead and copper into your tap water from your household plumbing. (See "Lead & Copper and Your Drinking Water" left.)
(5) These readings are prior to treatment. Our treatment facility reduces the amount of iron and manganese prior to distribution to our customers. Manganese post treatment ranged between <0.005 to 0.063 ppm.

SEE REVERSE SIDE FOR EXPLANATION OF ABBREVIATIONS AND TERMS USED IN TABLE

ABBREVIATIONS AND EXPLANATION OF TERMS USED IN TABLES

Bacterial testing rotates within all the Town's well sites, 4 routine test samples are collected each month for a total of 48 samples collected and tested each year.

ppm = parts per million.

ppb = parts per billion.

Mfl = million fibers per liter.

Uho/cm = micro mohs per centimeter

MCL = Maximum Contaminant Level = the highest level of a contaminant allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
- **MCL** = Zero tolerance for routine and repeat sampling of total coliform.
- ♦ **MCL** = Zero tolerance for routine and repeat sampling of total coliform including a sampling for fecal coliform (E. coli).

MCLG = Maximum Contaminant Level Goal: The level of contaminant allowed in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

ND = Not Detected means that the component is not detected with laboratory testing equipment at this level (from < .10 to <.40).

NA = Not Applicable

Bacterial Contaminants: *Coliform Bacteria* are usually harmless, but their presence in water can be an indication of disease-causing bacteria.
Fecal Coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children and people with severely compromised immune systems. Testing for bacteria is done at 9 different sites throughout the town system.

Copper is an essential nutrient but some people who drink water that contains copper in excess of the action level over many years could suffer liver or kidney damage. The Action Level is exceeded if more than 10% of the homes tested have copper levels greater than 1.3 parts per million.

Lead can affect infants and children who drink water in which it is present in excess of the action level. Slight deficits in physical or mental development could be experienced in attention span and learning abilities. Adults who drink this water over long periods of time may develop kidney problems or high blood pressure. Exceeds the Action Level if 10% of the homes tested have lead levels greater than 15 parts per billion.

ABBREVIATIONS Continued Column Three

HOW DO WE PROTECT WATER QUALITY?

PROTECT GROUNDWATER

Even though our water system is from deep wells, we all need to take measures to not pollute groundwater sources. Properly dispose of waste products such as paint, used motor oil, anti-freeze, or cleaning products.

Island County Solid Waste accepts various hazardous materials at no charge. Household hazardous waste in small amounts is accepted seven days a week from 9:30 a.m. 5:00 p.m. except some holidays. Business hazardous waste is accepted by appointment only. See the scale attendant for directions and recording quantities. Call 360.679.7386 for more information. The site is approximately 1.7 miles south of Coupeville on Highway 20.

WHAT CAN YOU DO ABOUT CHLORINE TASTE AND ODOR?

Chlorine kills organisms that may cause disease.

If you remove the chlorine with a filter, refrigerate the water to limit bacterial re-growth. You can also:
- Fill a pitcher and let it stand in the refrigerator overnight. (This is the best way.)
- Fill a glass or jar with water and let it stand in the sunlight for 30 minutes.
- Heat the water to about 100 degrees Fahrenheit.

WHAT IS "HARD" WATER?

"Hardness" in drinking water is caused by naturally occurring minerals, particularly calcium and magnesium. If calcium and/or magnesium is present in your water in substantial amounts, the water is said to be hard because making a lather or suds for washing is *hard* (difficult) to do. Water containing little calcium or magnesium is called *soft* water. The degree of *hardness* increases as the calcium and magnesium content becomes greater. Water becomes *hard* by picking up minerals as it moves through soil and rock. Because water is a good solvent, it picks up minerals easily. Although *hard* water can be a soap-scum and plumbing-fixture nuisance, it's not dangerous. Calcium and magnesium are essential nutrients that don't pose a public health hazard. *Hard* water is safe for drinking, cooking, and other household uses.

SYNTHETIC ORGANIC COMPOUNDS

Though we are not required to include No Detections (ND) in our Water Quality Report, we thought you should know that during the 2012 testing period all of the Town's source wells were tested for the presence of pesticides and herbicides with a result of ND.

LEAD & COPPER AND YOUR DRINKING WATER ARE YOU AT RISK?

The Town's source waters do not contain lead or copper. However, lead and copper can leach into residential water from building plumbing systems containing copper plumbing, lead-based solder, brass fixtures or some types of zinc coatings used on galvanized pipes and fittings.

Homes built or plumbed with copper pipe prior to the lead solder bans of 1985, would likely have used lead-based solder, and are considered "high risk" by EPA's criteria. Brass fixtures, regardless of age, generally also contain some lead. Metals leach from plumbing systems when water has not been used and sits stagnant in the pipes for long periods of six or more hours.

If a home is "high risk" you may want to flush water that has been standing for six hours or longer, prior to using it for cooking or drinking. Many people flush until they notice the temperature change - usually less than 30 seconds. However, be "water smart" and use the flushed water for watering plants or washing dishes. You should never use hot tap water for cooking, drinking or making baby formula because hot water dissolves metals faster.

ABBREVIATIONS Continued

TDS: Total Dissolved Solids is a measure of the portion of solids that passes through a filter of 2.0 ppm or the solids retained by a filter. Dissolved solids may adversely affect the palatability of the water for the consumer; highly mineralized waters can be unsuited to industrial users as well. A limit of 500 ppm is desired in drinking water for reasons of palatability.

Conductivity is a measure of an aqueous solution's ability to carry electric current. High conductivity readings are partly due to high dissolved solids.

Asbestos: Potential sources include decay of asbestos cement water mains and/or erosion of natural deposits. Monitoring of asbestos is done due to the potential for some people who drink water with asbestos above the MCL over many years to have an increased risk of developing benign intestinal polyps.

Coupeville water is chlorinated. In water systems that are chlorinated, certain by-products form as a result of chemical reactions between chlorine and naturally-occurring organic matter in the water. This disinfection process is carefully controlled to remain effective, while keeping disinfection by-product levels low.