

WATER QUALITY REPORT

CEDAR RIVER WATER & SEWER DISTRICT

2008

The staff at Cedar River Water & Sewer District (CRWSD) is pleased to provide its customers with the 11th annual Water Quality Report. This report is required as part of the Federal Safe Drinking Water Act and is for the calendar year 2008. Its purpose is to update our customers knowledge about the District's water sources, water quality, District projects and programs related to your drinking water. It is hoped this report will help you and your families make well-educated decisions about a very important subject – your drinking water. **First and most important, we are happy to report that as a result of Cedar River's and Seattle Public Utilities' commitment to safe drinking water, no water quality violations occurred in our District last year.**

ABOUT THE DISTRICT

In 2008 the District purchased all of its water from Seattle Public Utilities (SPU). This water comes from the Cedar River Watershed (90,495 acres). It is considered a surface water source and is located in a remote, uninhabited area of the Cascade Mountains. It is made up of primarily melted snow pack. The water for Cedar River's customers is drawn downstream from the Lake Young's Reservoir.

In 2008 an inter-tie with Covington Water District (CWD) may have been used on an intermittent basis. Those customers who live or work near the Southeast area of the District may have received CWD and/or Tacoma water for short periods of time. Covington water is considered groundwater and Tacoma city water is considered surface water. For those who may have visited or work at the VA Cemetery, water is provided from the Covington Water District, Tacoma and/or from the City of Auburn. Information on Covington, Tacoma and Auburn Water can be found in the chart on page 3.

WATER QUALITY

Seattle Public Utilities (SPU) protects the quality of our drinking water by enforcing an aggressive watershed protection plan. Agricultural and industrial activities within the watershed are prohibited. Access to the watershed is restricted to authorized staff and scheduled educational programs conducted by SPU staff.

The excellent quality of our source water allows drinking water to be provided with very little additional treatment. Chlorine is added for disinfection at the Landsburg Diversion Dam and again just before entering the District's system. Chlorination destroys Giardia, bacteria, and viruses that may be present in the source water.

The District also operates a re-chlorination system at our 216th Ave booster pump station. This system supplements the chlorine residuals for disinfection in one area of the District furthest from the Lake Young's reservoir. The District monitors chlorine residuals closely and if the residuals drop below acceptable levels District staff responds by flushing the affected area to re-establish proper chlorine levels.

Our water is naturally soft, (hardness as CaCo₃ is 1.20 grains/gal) with a pH of 7.95-8.47; minerals (calcium oxide and sodium carbonate) are added to help inhibit corrosion in building plumbing systems. In accordance with a Seattle public vote held in November 1968, fluoride is added to the drinking water at appropriate levels to prevent tooth decay.

After the water enters the CRWSD system, great care is taken to ensure its excellent quality all the way to your meter. SPU and CRWSD staff monitors water quality in the source water, treatment processes, and distribution system 365 days a year. Testing is conducted at specific frequencies (continuously, daily, monthly, quarterly, or annually) and locations (prior to treatment, after treatment, and throughout the distribution system) in accordance with state and federal regulations.

ADDITIONAL INFORMATION

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 radioactive material, and it can pick up substances resulting from the presence of animals or human activity. **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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).** In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Federal Food and Drug Administration has established limits for contaminants in bottled water and is responsible for providing public health protection in this area

CRYPTOSPORIDIUM

Cryptosporidium is a disease-causing organism commonly found in surface waters. Sources include deer, elk and voles in the watershed. *Cryptosporidium* was first recognized as a health threat in 1976. **Source water monitoring conducted by Seattle during 2008 detected *Cryptosporidium* in 1 of 3 samples collected from the Cedar River, but the amounts measured did NOT reach the action level.** There have been no disease outbreaks associated with Seattle's drinking water. An ozonation and ultraviolet light treatment plant was constructed and put online at the Lake Young's Reservoir in July 2004. Ozonation is very effective at destroying *Cryptosporidium*.

Even if small numbers of *Cryptosporidium* oocysts are ingested, flu-like symptoms (e.g. diarrhea, abdominal cramps, headache, nausea, vomiting and low-grade fever) can occur. Not everyone who ingests the oocysts will become ill, however the immuno-compromised population, persons with HIV/AIDS, or cancer and organ transplant patients can be at great risk if they contract cryptosporidiosis.

LEAD & COPPER MONITORING

The water delivered by CRWSD to your home does not contain lead or copper. However, lead and copper can leach into water from building plumbing systems. Structures plumbed with copper before the 1985 King County lead solder ban probably would have lead-based solder. The Environmental Protection Agency considers these residences as "high risk". Brass fixtures also generally contain lead, which can leach into standing water with contact time greater than six hours.

The samples are drawn from the tap of "high risk" homes. Of all the homes tested by SPU (customers within the city of Seattle and all Purveyors that purchase water from SPU), none of the 100 samples taken on the Cedar River Water supply exceeded the action level for lead, and none exceeded the action level for copper.

ADDITIONAL IMPORTANT INFORMATION ABOUT DRINKING WATER

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 from 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).

LEAD AND COPPER TESTING RESULTS

| Parameter and units | MCL G | Action Level | Source | *SPU Water | CWD Water | Auburn Water | Tacoma Water |
|---------------------|-------|--------------|---------------------------------|----------------------------------|---|--------------|--------------|
| Copper PPM | 1.3 | 1.3 | Corrosion of household plumbing | 0.11 PPM 0 out of 51 Exceeded | .39 PPM, (90% of the 30 samples taken at customer taps were less than the value shown) No samples exceeded the AL in 2007 | | |
| Lead PPB | 0 | 15 | Corrosion of household plumbing | 4.6 PPB 0 out of 51 Exceeded | 5.0 ppb (90% of the 30 samples taken at customer taps were less than the value shown) No Samples exceeded the AL in 2007 | | |

*SPU Lead and Copper testing was last conducted in 2006, Other sources were tested in 2007

WATER QUALITY MONITORING RESULTS

| Detected Substance | Unit of Measure | Federal Standards Ideal Goal (MCLG) | Allowable Level (MCL) | Water Supplied to CRWSD Customers | | | | | | Typical Source |
|--|--------------------|--|---|---|------------------------|---|--|--------------|------------|---|
| | | | | *SPU WATER | | Covington Water | Auburn Water -V.A. Cemetery only | Tacoma Water | | |
| | | | | Average | Range | | | Average | Range | |
| Measured Before Treatment | | | | | | | | | | |
| Total organic carbon | PPM | NA | TT | 0.08 | 0.4 - 1.3 | Average .8 ppm | | | .4-1.3 | Naturally present in the environment |
| Cryptosporidium | #/100L | NA | NA | ND | ND-2* | NR | | | | Naturally present in the environment |
| Measured After Treatment | | | | | | | | | | |
| Turbidity | NTU | NA | TT | 0.4 | 0.2-2.6 | Highest Level Detected 2.94 NTU | | | 0.1 – 2.94 | Soil Runoff |
| Fluoride | PPM | 4 | 4 | 0.97 | 0.8-1.0 | CWD ground water sources are not fluoridated. The Tacoma shared surface water source and the Seattle emergency source is fluoridated with a target level of 1.0 ppm (fluoride). The Seattle and Tacoma source waters are blended with CWD's ground water sources and the resulting levels in the CWD distribution system averaged .35 ppm (Range 0-1.2) | | | | Water additive to promote healthy teeth |
| Barium | PPB | 2000 | 2000 | 1.5 | (One sample) | 1.5 ppb one sample | | | | Erosion from Natural Deposits |
| Nitrates | PPM | 10 | 10 | ND | (one sample) | ND-0.5 ppm | Average 1.7 Range .9-3.6 4 sources | NR | NR | Erosion from Natural Deposits |
| Bromate | PPB | 0 | 10 | .05 | ND to 0.7 | Average 0.05 ppb Range ND-0.7 | | | | By-product of ozonation |
| Measured in the Distribution System | | | | | | | | | | |
| TTHM | PPB | NA | 80 | Annual Average 27.6 | Stage 2 IDSE 11.2-43 | Annual average 9.01 ppb ND-27.1 Stage 2 IDSE Monitoring (Range 0.5-82.9) | | | | By-product of chlorination |
| Chlorine | PPM | 4 | 4 | Annual Average 1.01 | Range .06 to 1.87 | Annual average .75 ppm Range .06-1.64ppm | | | | Drinking Water Disinfectant |
| HAA5 | PPB | NA | 60 | 35.2 | Stage 2 IDSE 16.5-41.9 | Average 9.83 ppb (Range ND- 32.2) Stage 2 IDSE Monitoring (Range 1.0-61.8) | | | | By-product of drinking water chlorination |
| Total Coliform Bacteria | % positive samples | 0 | Presence of bacteria in ≥5% mo. samples | Cedar River Water & Sewer had no positive samples in 2008 | | 2 Samples out of 45 or 4.4% for the month of August 2008 were positive for Coliform Bacteria. Repeat samples were negative. | | | | Naturally Present in the environment |
| Fecal Coliform and E Coli | % positive samples | 0 | | | | NR | NR | NR | NR | |

SEE NEXT PAGE FOR DEFINITIONS ON CHART ABOVE

DEFINITIONS

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

MCLG: Maximum Contaminant Level Goal: 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.

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

AL: Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirement, which a water system must follow.

NA: Not Applicable

ND: Not Detected

NR: Not Reported

1mg/l = 1000ugl

For water samples: 1 part per million (PPM)=1mg/l

1 part per billion (ppb)= 1ug/l

Turbidity: A measure of waters clarity, has no direct health effect but indicates overall quality of the water.

WHAT'S NEW FOR 2009

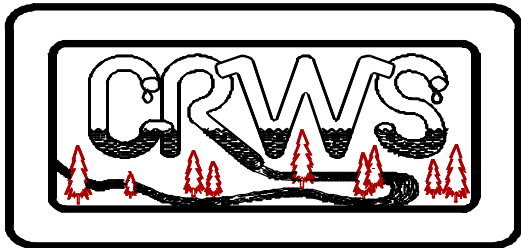
East Area Well Development

The District has been working to add an additional water source to serve the customers of the District. In 2008 the District began construction on infrastructure to start producing and introducing well water into the District system. Great care and testing has been done to insure the make up of the water will match and blend with the existing purchased SPU water. The water produced from the well will be treated and fluoridated consistent with the levels found in SPU water. By bringing this additional water source into the District system, the District can reduce the expense of purchasing water from SPU. The East area well should be in service by the summer of 2009.

This material can be made available to accommodate people with disabilities and those who need language translation at 425-255-6370.

Please remember, your input and questions are always welcome. You may call the District Monday through Friday 7:00 – 5:30, or write to the Board of Commissioners here at the District office. Further questions regarding the water system operation should be directed to Kirk Hunkeler at 425-255-6370.

The District wishes to acknowledge the assistance of the staff at Seattle Public Utilities in the preparation of this eleventh annual Water Quality Report



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