





2004 EDMONTON WATER PERFORMANCE REPORT

This report highlights some key activities undertaken in Edmonton by EPCOR Water Services in 2004. The activities are grouped under six major headings: capital projects, system reliability, customer service, environment, safety and water quality. The majority of this report will focus on the condition of EPCOR's drinking water and the programs that protect the high quality of our water supply to Edmonton and surrounding regions.

Safe drinking water is an essential resource for our customers. We test our water regularly and our laboratory is approved by Alberta Environment. We are also accredited by the Standards Council of Canada's (SCC/CAEAL) program to ISO/IEC 17025 for specific tests. The information in this report is also submitted routinely to Alberta Environment as part of our License to Operate. They ensure we are meeting the many regulatory standards and testing protocols required to ensure safe drinking water.

The bottom line is that our water is safe to drink. Our water quality consistently meets, or surpasses, provincial and federal guidelines in better than 99% of samples taken.

This is an overview report. For additional information and more detailed reports visit our website at www.epcor.ca. You can also call us at 310-4300 (toll free anywhere in Alberta).



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2004 HIGHLIGHTS

In order to ensure that Edmonton water customers receive the best service possible, EPCOR Water Services Inc. (EWSI) has preset performance guarantee standards in the areas of system reliability, customer service, environment, safety and water quality. Each of the following indices are based on a combination of measures derived from Industry standards and EPCOR's own stricter internal standards. The goal is to earn 100 performance points or more. Results can surpass 100% if EWSI meets stretch targets. If EWSI does not earn 100 performance points, it will pay a penalty fee. This is part of our Performance Based Results strategy.

2004 Water System Service Quality Measures

	Standard Performance	Actual Performance	Points Earned
<i>System Reliability Index</i>			
Water Main Break Factor	640	436	6.6
Water Main Break Repair Duration Factor	92.8%	94%	5.0
Planned Interruption Factor	95.0%	99%	5.2
Water Pressure Factor	5	0	6.0
Water Loss Factor	4.90%	5.1%	4.9
<i>System Reliability Index Total</i>			27.57/25.0
<i>Customer Service Index</i>			
Post Service Audit Factor	71.6%	70.6%	7.2
Response Time Factor	22	19	7.6
Home Sniffing Factor	92.5%	95.6%	6.9
<i>Customer Service Index Total</i>			21.7/21.0
<i>Environmental Index</i>	114	96.4	12.7/15.0
<i>Safety Index</i>	115	119.1	15.5/15.0
<i>Water Quality Index</i>	99.6%	99.7%	25.0/25.0
<i>Aggregate Points Earned (sum of all indices)</i>			102.4
<i>Points Required at Performance Standard</i>			100.0
<i>Points Above/ (Below) Performance Standard</i>			2.4



2004 HIGHLIGHTS

CAPITAL PROJECTS

- Construction of Rosedale ultraviolet light disinfection system was substantially completed. As well, a new caustic soda chemical feed system and lowlift pump were built.
- The number of water meters per year that will reach the end of their lifecycle is forecast to increase from 140 in 2003 to 11,000 in 2008. A program has been put in place to replace these meters.
- Cast Iron water mains are prone to breaks so EWSI has a long term replacement program. In 2004, the Cast Iron main renewal program budget was doubled and ten km were replaced. Currently, there are approximately 800 km of cast iron pipe remaining in Edmonton's total 3400 km of water system.
- Water Capital Steering Committee managed \$32.4M of capital projects.
- Rosedale Water Treatment Plant #3, which has been inoperable since the early 1990's, was fully decommissioned.

SYSTEM RELIABILITY

- There were 436 main breaks which is less than the average of 640 for Edmonton.
- Our system water losses were 5.1%, slightly above the EWSI target of 4.9%. The industry average is 10%.

CUSTOMER SERVICE

- All customers are metered. In 2004, residential water rates ranged from from \$1.13/m³ to \$1.17/m³. As an incentive to use water wisely the rates increase with the amount of water used. Commercial and Multi-Residential customers' rates range from \$0.48/m³ to \$1.04/m³, which reflects the true cost of servicing these groups.
- EWSI supported construction of a waterfall structure in Edmonton's Churchill Square as part of the City's 100th Anniversary celebrations and EWSI's 100th Anniversary legacy project.
- EWSI has a restored historic water wagon which takes part in events around Alberta, including the Klondike Days parade in Edmonton.
- EWSI continued its fundraising for "Water of People", a non-profit organization that brings potable water and sanitation to lesser developed countries.
- The EPCOR Climate Change Exhibit, a travelling exhibit from Science North, and Forces of Nature in IMAX are new to the Edmonton Odyssium in 2004 and are proudly supported by EPCOR.
- EWSI has a 24/7 water emergency phone line to answer customer inquiries. It receives approximately 48,000 calls a year. Monthly telephone surveys are conducted to measure customer satisfaction with the employees who answer the emergency phone calls and with the field crews who repair the problems. The customer satisfaction rating was 77.6% and the target is 71.6%.
- Epcor's website provides a variety of customer information including water rates, billing inquiries, water quality, water efficiency, and school education. It received nearly 1 million visitors in 2004.



2004 HIGHLIGHTS

ENVIRONMENT

- Partnerships continued to be a focus of EWSI's watershed protection program. Some partner projects included monitoring outfalls and creeks within the City of Edmonton, upstream sampling with Alberta Environment, and sub-basin stewardship initiatives with Alberta Agriculture.
- Efforts to promote and practice the wise use of water included public education, school programs, and water utility "best practices" activities, e.g. leak detection, water loss control, and uni-directional flushing of water mains.
- EWSI used partnerships to extend the reach of its summer and fall water conservation campaigns. EWSI partnered with Hole's Greenhouse to promote proper outdoor water use in lawns and gardens. In the fall, EWSI partnered with Carbon Dioxide Reduction Edmonton (CO2RE) and Home Depot to promote, among other things, the use of Ultra Low Flush toilets and leak detection to reduce water consumption and the associated production of greenhouse gases.

SAFETY

- EWSI continues its participation with the Behaviour Based Safety program Safe Start™.
- A focus on ergonomics is underway. It includes promotion of proper techniques to help reduce muscle strain by using proper techniques, as well as utilizing mechanical help when available.

QUALITY

- Edmonton continues to receive some of the best quality drinking water in Canada. Our water expertise is sought by various regional, provincial, national, and international organizations.
- A few localized violations occurred in the distribution system following pipe breaks, but these were brought within compliance in less than 24 hours. (See the Table on page 20 for results).
- A very mild spring runoff period meant that the activated carbon dosages used to reduce taste and odour were the lowest in 10 years. This resulted in significant chemical cost saving.
- Continued research on hot water circulation and erosion corrosion in metal pipes.
- Began an Edmonton Cross Connection Control Program to ensure commercial/industrial buildings have the proper backflow devices installed to prevent accidental contamination of the public water supply.



LOOKING AHEAD

- A \$110 million upgrade of the E.L. Smith expansion is planned to start in 2005, but will not be complete till early 2008. Capital projects include a new river intake, lowlift pumphouse, new filters, new UV reactors, expanded capacity to chemical feed systems and a new transmission main out of the plant to the southwest area of the city.
- In celebration of the province of Alberta's centennial, EPCOR is sponsor of the Alberta Scene, an event that will showcase over 600 artists from Alberta in thirteen days. The event will take place in Ottawa, exposing Alberta's talent to a national audience.



WATER QUALITY

WATERSHED PROTECTION

The North Saskatchewan River (NSR) is our water supply source. Protecting our river/water source is the first step in the multiple-barrier approach to protecting public health. Ensuring that the source of drinking water is as clean as possible helps to safeguard the health of our customers. We are a founding member of the North Saskatchewan Watershed Alliance, which has been appointed by Alberta Environment as a Watershed Council, under the “Water-for-Life” Strategy.

Alberta’s North Saskatchewan River Basin upstream of Edmonton covers 28,000 km² and includes mountains, foothills, forest, muskeg and farmland. The NSR flows from the foot of the Columbia Icefields, located in the Rocky Mountains. En route to Edmonton, the NSR is also fed by the Clearwater, Brazeau, and Nordegg rivers and numerous creeks.

Our watershed protection goals include:

- Acting as a resource and leader regarding water quality issues in the North Saskatchewan River Basin.
- Forming partnerships to work cooperatively on watershed issues including developing strategies to protect the watershed as a drinking water resource.
- Monitoring water quality changes in the North Saskatchewan River and responding to developing water quality issues in the basin.

WATER TREATMENT PROCESS

Edmonton’s two water treatment plants (Rosssdale and E. L. Smith) remove the natural and human sources of contamination from the North Saskatchewan River so that it is safe and pleasant to drink. Water treatment in both plants is a multi-step process.

Clarification

Before the river water enters the water treatment plant it flows through a set of screens to remove fish, leaves and branches. The first step of the water treatment process is to add alum to help remove dirt. Just like a magnet attracts iron, alum attracts dirt and silt particles. Together they form large particles called floc which settle to the bottom of the clarifier. When floc settles to the bottom of the clarifier it is called sludge; this is discharged to waste. Activated Carbon powder is also added to help remove taste and odour (usually most evident during spring runoff.)

Disinfection/Filtration

In the next step chlorine is added to the water. Chlorine is a disinfectant that kills bacteria and viruses which can make people ill. The water then flows through filters made out of fine grains of sand which trap any remaining dirt or bacteria. Ammonia combines with chlorine to form chloramine which is a long-lasting disinfectant that keeps the water clean as it is distributed to EPCOR’s customers. After filtration, the water also passes through a series of ultraviolet light bulbs that sterilize any remaining organisms. Fluoride and caustic soda are also added after filtration. Fluoride helps prevent dental cavities in people who drink the water, and caustic soda is added to adjust the pH of the water to make it non-corrosive. Onsite reservoirs at the water plants hold the water for additional disinfection time. From there it passes through the pipes in to individual homes.

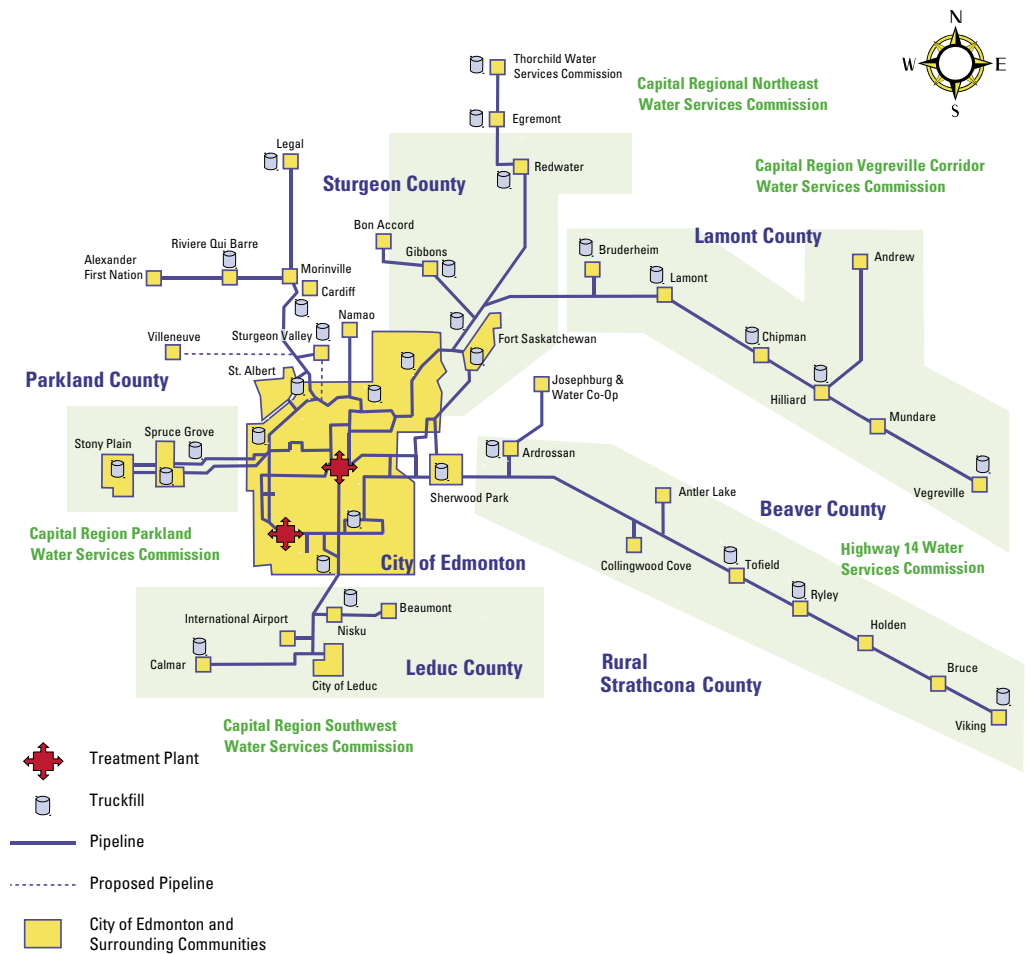


WATER SUPPLY

Who Receives EPCOR Water?

EPCOR's treated water is supplied to many communities, including: Alexander First Nations, Andrew, Antler Lake, Ardrossan, Beaumont, Bruce, Bruderheim, Calmar, Cardiff, Chipman, Collingwood Cove, Edmonton, Egremont, Fort Saskatchewan, Gibbons, Hilliard, Holden, Josephsburg, Lamont, Leduc, Legal, Morinville, Mundare, Namao, Nisku, Parkland, Redwater, Riviere Qui Barre, Ryley, St. Albert, Sherwood Park, Spruce Grove, Stony Plain, Sturgeon County, Thorhild, Tofield, Vegreville and Viking.

Capital Region Service Area





MONITORING AND REPORTING

Managing the Distribution System

Another key to maintaining good water quality is to effectively manage the 3400 km water distribution system. Ten reservoirs are located throughout the city to help balance peak periods of water use. It is important for the water to remain fresh and retain sufficient chloramines for disinfection. A computer model of the distribution system helps control water movement and anticipate water quality changes. Each month, we analyze more than 200 distribution system water samples for various parameters. And, we follow-up on customers' water quality concerns.

Monitoring and Reporting Requirements

Alberta Environment ensures that public water systems comply with all regulations and report monitoring results from the raw water source, the distribution system, and the tap. EPCOR monitors the physical, chemical and microbiological characteristics of your drinking water. EPCOR's water treatment plants are controlled by 49 provincially certified water plant operators.

Over 179 different physical, chemical, microbiological and radiological parameters are regularly checked in order to meet provincial and national guidelines. Over 149,000 tests are carried out each year internally, and additional tests are sent to external laboratories for analysis. Plant Operators perform an additional 110,000 water quality tests a year for plant process control. Water quality data are also supplied by 150 electronic on-line analyzers which run 24 hours a day.

Health Canada Sets Guidelines While Provincial Agencies Regulate Water Quality

In order to ensure that tap water is safe to drink, Health Canada sets guidelines which limit the amount of certain parameters in water provided by public water systems. Health Canada sets conservative limits based on potential health impacts of the various parameters. All 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 your local Board of Health, Health Canada or EPCOR.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy or those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and some infants can be particularly at risk from some bacteria. These people should seek advice about drinking water from their health care providers.

The drinking water quality parameters in Alberta meet or are more stringent than the National Guidelines for Canadian Drinking Water Quality recommended by Health Canada.



STAKEHOLDER INVOLVEMENT

EPCOR has promoted extensive stakeholder involvement around water quality initiatives, including:

- A Water Public Advisory Committee (which includes residential, commercial and industrial representatives) meets quarterly to provide input on various water issues.
- A Water Quality Advisory Council (which includes representatives from the Capital Health Authority, Alberta Environment, regional customers, and large industrial water users in the Edmonton region) provide their views and expertise on technical water quality issues.
- A yearly Home Sniffing Program, where over 100 volunteers rate the smell of their home tap water during February, March and April – typically when spring runoff occurs in the North Saskatchewan River. More than 95% of participants were satisfied with the quality of their water. The target is 92.5% satisfaction.



IMPORTANT DEFINITIONS

- **Maximum Acceptable Concentration (MAC).** The highest level of a contaminant that is allowed in drinking water. These are established for certain substances which are known or suspected to cause adverse health effects.
- **Interim Maximum Acceptable Con-centration (IMAC).** For certain contaminants suspected of adverse health effects, but where there are insufficient toxicological data to derive a MAC with reasonable certainty, interim values are recommended employing larger safety factors.
- **Aesthetic Objective (AO).** Aesthetic objectives apply to substances which can affect its acceptance by consumers (i.e. taste & odour, colour, clarity).
- **Operational Guideline (OG).** A guideline for aluminum has been set to optimize control of water treatment plant residuals.



TEST BACKGROUND INFORMATION

Alberta Environment requires reporting of the data contained in the tables labelled “regulated”. Additionally, EPCOR tests for many unregulated contaminants to meet our commitment to providing our customers with the best water possible. This data is contained in tables labeled “unregulated”.

Population Served; Source of Water. EPCOR supplies drinking water to 910,000 people in over 45 communities in the Edmonton Capital Region. The water is drawn from the North Saskatchewan River which runs through Edmonton, Alberta.

Analysis Methods. “Standard Methods for the Examination of Water and Wastewater,” 20th Edition; and other Alberta Environment approved methods. EPCOR conducts routine tests of the drinking water and has determined your drinking water meets or is better than all water quality standards.

Sample Locations. The following tables list analysis results for raw water (before treatment) and treated water.

Primary Standards. Regulators set primary standards to protect public health. Primary standards are shown as maximum acceptable concentrations (MAC).

Aesthetic Objectives. Health Canada sets secondary standards as guidelines to assure good aesthetic water quality. Secondary standards identify levels of substances that may affect taste, odour or colour of water; may stain sinks and bathtubs; or may interfere with treatment processes.

Units of Concentration. Most substances listed are reported in units of concentration, milligrams per litre (mg/L). When other units are used, they are shown adjacent to the name of the substance. One milligram per litre is commonly referred to as one part per million. One part per million is the equivalent to one drop in 1/2 bathtub full of water or one second in 12.5 days. One part per billion is equivalent to one drop in 520 bathtubs full of water or one second in 32 years. It is also referred to as one microgram per litre ($\mu\text{g/L}$).

Non-detected Substances. Many substances were not detectable by the sensitive analysis methods used. They either were not present or were present in levels below the detection limits of the test method.



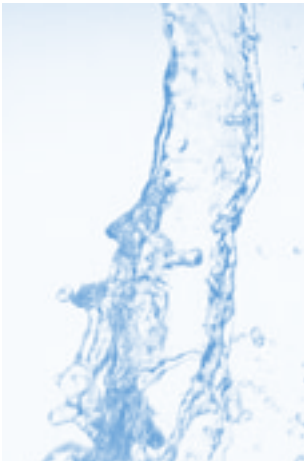
TEST RESULTS

Results of Raw Water Analysis Before Treatment (Regulated)

MICROBIOLOGICAL PARAMETERS	MAXIMUM DETECTED	YEARLY GEOMETRIC MEAN	MAXIMUM CONCENTRATION (MAC)	SOURCE OF CONTAMINATION
Total Coliform Bacteria	16,000 per 100 mL	345 per 100 mL	N/A	Soil bacteria and animal, human waste
Fecal Coliform Bacteria	2,300 per 100 mL	43 per 100 mL	N/A	Animal, human waste
<i>E.coli</i> Bacteria	570 per 100 mL	29 per 100 mL	N/A	Animal, human waste
Viruses (Human enteric)	95 per 100 L	3 per 100 L	N/A	Human waste
<i>Giardia</i>	520 per 100 L	98 per 100 L	N/A	Animal, human waste
<i>Cryptosporidium</i>	10 per 100 L	2 per 100 L	N/A	Animal, human waste

Notes:

Turbidity and NTUs – The turbidity in the North Saskatchewan River fluctuates throughout the year. It is usually high in the spring and summer, and low in the winter. Turbidity is a good measure of how well plant treatment is removing particles. Turbidity is measured in NTUs (nephelometric turbidity units which are a measure of the clarity of the water). Turbidity is regulated because the particles can provide a medium for bacterial growth and can also interfere with the removal of bacteria through disinfection.



TEST RESULTS

Microbiological Testing – Microbiological testing and control helps protect the public from illnesses such as cryptosporidiosis, *Giardiasis*, polio, diphtheria, typhoid and cholera. Health Canada sets guidelines for total coliforms and *E.coli*. Alberta Environment has adopted part of the US Environmental Protection Agency's Surface Water Treatment Rule, which requires a certain level of disinfection to destroy a minimum level of *Giardia* cysts and viruses. Testing before the water treatment process helps confirm the level of treatment required.

Total Coliform bacteria – These bacteria are naturally present in the environment; but they are used as an indicator that other, potentially harmful bacteria, may be present.

Fecal Coliform bacteria – The presence of fecal coliforms or *E.coli* indicates that the water may be contaminated with human or animal wastes. These contaminants can cause diarrhea, cramps, nausea, headache or fatigue.

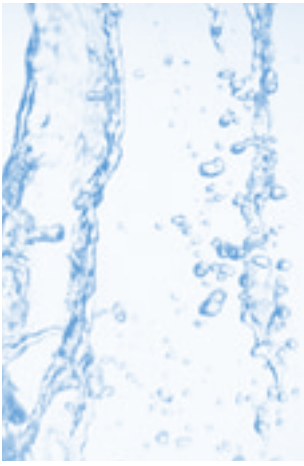
Viruses (human enteric) – The presence of human enteric viruses indicates that the water may be contaminated with human waste. These contaminants can cause diarrhea, cramps, nausea, headaches and fatigue. Some viruses can cause serious illnesses such as polio and hepatitis A.

Giardia – Wildlife, agricultural livestock and sewage plant effluents in the watershed may be sources of *Giardia*, the organism that causes *Giardiasis*. The clarification and disinfection treatment processes used by EPCOR has proven effective in removing 99.999% of *Giardia*.

Cryptosporidium – Growing scientific knowledge about *Cryptosporidium* suggests it is naturally present in bodies of water throughout the world. Surface water supplies are particularly vulnerable if they receive runoff or pollution from human or animal waste. The North Saskatchewan watershed is impacted by industrial, agricultural, animal and human pollution. EPCOR samples at least once a month for *Cryptosporidium* using the most current testing methods. EPCOR has installed a new UV disinfection system which is effective in inactivating *Giardia* and *Cryptosporidium*. UV was installed at E.L. Smith WTP in 2002, and a similar system is being installed at the Rosedale Plant in 2004 and will be completed by mid-2005.

Results of Water Analysis After Treatment (Regulated)

PARAMETER	MAXIMUM AMOUNT DETECTED	YEARLY AVERAGE AMOUNT	MAXIMUM ACCEPTABLE CONCENTRATION (MAC)	SOURCE OF CONTAMINATION
Microbiological				
Total Coliform bacteria	100% of samples < 1 per 100mL	100% of samples < 1 per 100mL	No consecutive sample should contain coliforms	Human or animal waste
<i>E. Coli</i> bacteria	100% of samples < 1 per 100mL	100% of samples < 1 per 100mL	Non detected	Human or animal waste
Physical				
Turbidity	0.10 NTU	0.06 NTU	Filters 0.3 NTU	Silt, clay
Colour	1 TCU	1 TCU	< 15 TCU (AO)*	Organic material
pH	8.2	7.7	6.5 - 8.5 (AO)	
Total dissolved solids	225 mg/L	198 mg/L	< 500 mg/L (AO)	Dissolved salts
Temperature	24°C	8°C	< 15°C (AO)	Aesthetic parameter
Inorganic				
Aluminum	0.10 mg/L	0.03 mg/L	0.10 mg/L	Operational Guideline 0.1 mg/L
Arsenic	0.003 mg/L	< 0.002 mg/L	0.025 mg/L	Trace metal
Barium	0.084 mg/L	0.054 mg/L	1.0 mg/L	Trace mineral
Boron	0.020 mg/L	0.011 mg/L	5.0 mg/L	Trace mineral
Chlorine residual (as Chloramine)	2.10 mg/L	1.77 mg/L	3.0 mg/L	Disinfectant
Chloride	7.6 mg/L	3.1 mg/L	250 mg/L	Dissolved salt
Copper	< 0.003 mg/L	< 0.003 mg/L	1.0 mg/L	Trace metal
Cyanide	0.003 mg/L	< 0.001 mg/L	0.2 mg/L	Inorganic chemical
Fluoride	0.86 mg/L	0.78 mg/L	1.5 mg/L	Optimum set at 0.8 mg/L
Iron	0.005 mg/L	< 0.003 mg/L	0.3 mg/L	Trace metal
Lead	< 0.0005 mg/L	< 0.0005 mg/L	0.010 mg/L	Trace metal
Manganese	0.007 mg/L	0.001 mg/L	0.05 mg/L	Trace metal
Nitrate	0.12 mg/L N	0.04 mg/L N	10 mg/L N	Fertilizer runoff
Sodium	23 mg/L	10.1 mg/L	< 200 mg/L (AO)	Dissolved salt
Sulphate	116 mg/L	62 mg/L	500 mg/L	Dissolved salt
Uranium	0.005 mg/L	0.0009 mg/L	0.02 mg/L	Trace metal
Zinc	0.009 mg/L	< 0.005 mg/L	5.0 mg/L (AO)	Trace metal
Organic				
Trihalomethanes	21 µg/L	8 µg/L	100 µg/L	Disinfection by-product
Radioactive Parameters				
Gross Alpha	0.01 Bq/L		0.1 Bq/L	Radionuclide
Gross Beta	0.5 Bq/L		1 Bq/L	Radionuclide
Cesium-137	0.5 Bq/L		10 Bq/L	Radionuclide
Iodine-131	2.0 Bq/L		6 Bq/L	Radionuclide
Radium-226	0.1 Bq/L		0.6 Bq/L	Radionuclide
Strontium-90	0.5 Bq/L		5 Bq/L	Radionuclide
Tritium	15 Bq/L		7000 Bq/L	Radionuclide



TEST RESULTS

Notes:

Total Coliform Bacteria – Testing for these bacteria after disinfection helps confirm the effectiveness of the treatment and disinfection process. (Bacteria may have been present in the source water). Total coliform bacteria are also indicators of possible contamination that might occur after treatment in the distribution system.

Chlorine Residual – Drinking water regulations require that we maintain detectable disinfectant (chlorine) residuals throughout the 3400 km of our water distribution system. Water entering EPCOR's distribution system has approximately 1.5 - 2.0 parts per million of combined chlorine (mg/L). Health regulations must balance the risk of water-borne disease with the risks from disinfectants. Health guidelines & regulations list a maximum residual of 3 parts per million.

Nutrients (Nitrate) – Nutrients can support microbial growth such as bacteria and algae. Nitrate and nitrite levels in excess of the standards can contribute to methaemo-globinaemia (blue baby syndrome) in infants less than 6 months old. In adults, excessive levels can contribute to kidney or spleen problems. The limit is 10 mg/L and EPCOR's yearly average is 0.04 mg/L.

Metals (Barium) – Barium levels in excess of the standard can contribute to high blood pressure. The limit is 10 mg/L and EPCOR's yearly average is 0.04 mg/L.

Aluminum – Prior to 1999 there was no Health Canada guideline for aluminum, but recent studies indicated a possible link between levels of aluminum and neurological diseases such as Alzheimer's or Parkinson's. Health Canada implemented an operational guideline of 0.1 mg/L. EPCOR water meets this guideline.

Lead – Lead levels are low in the drinking water leaving the Edmonton treatment plants (< 0.001 mg/L) and in the distribution system. However, it may be present in your home tap water as a result of dissolution from household plumbing systems containing lead (including solder, brass fittings) or the water meter service connections to your home. To be on the safe side, you should rid your plumbing system of standing water before the water is used for drinking or cooking.



TEST RESULTS

Avoiding Elevated Lead Levels at the Tap

- To minimize exposure to lead and copper in your tap water, run the water until it is cold (about 30-60 seconds) if it has been standing in the pipes for more than one day.
- Use only cold water for cooking and making baby formula.
- Use only lead-free solder when making plumbing repairs.
- If you replace faucets, check the label for lead content or lead-leaching potential.
- In 2001, EPCOR began installing meters which did not leach lead into drinking water.

Disinfection By-Products

During disinfection, certain by-products form as a result of a chemical reaction between chlorine and naturally occurring organic matter in the water. The disinfection process is carefully controlled so that disinfection is effective, while keeping the levels of disinfection by-products low. Current regulatory limits are 100 $\mu\text{g/L}$ for trihalomethanes; these limits are under review and additional limits may also be proposed for other by-products such as haloacetic acids. EPCOR's 2004 yearly average is 8 $\mu\text{g/L}$, much less than the limit.

*1 $\mu\text{g/L}$ = 1 part per billion

Results of Analysis After Treatment: Water Reservoir (Unregulated)

PARAMETER	MAXIMUM AMOUNT DETECTED	YEARLY AVERAGE AMOUNT	COMMENTS
Microbiological			
<i>Giardia</i>	< 1 per 1000 L	< 1 per 1000 L	Recommended non detectable
<i>Cryptosporidium</i>	< 1 per 1000 L	< 1 per 1000 L	Recommended non detectable
Chemical Parameters			
Alkalinity (total)	138 mg/L CaCO ₃	112 mg/L CaCO ₃	N/A
Ammonia	0.35 mg/L	0.24 mg/L	N/A
Chlorate	0.08 mg/L	0.03 mg/L	N/A
Hardness (total)	190 mg/L CaCO ₃	162 mg/L CaCO ₃	N/A
Potassium	1.1 mg/L	0.8 mg/L	N/A
Silicon	2.5 mg/L	1.7 mg/L	N/A
Organic Parameters			
Aldehydes	28.9 µg/L	19.5 µg/L	N/A
Bromodichloromethane	1.8 µg/L	0.7 µg/L	N/A
Chloral Hydrate	2.2 µg/L	0.9 µg/L	N/A
Chlorodibromoacetic acid	3.0 µg/L	2.0 µg/L	N/A
Chloroform	28.4 µg/L	12.1 µg/L	N/A
Dichloroacetic Acid	20.2 µg/L	9.5 µg/L	N/A
Dichloroacetonitrile	1.4 µg/L	0.6 µg/L	N/A
Dichloro-2-propanone	0.8 µg/L	0.8 µg/L	N/A
Haloacetic Acids	37.3 µg/L	18.2 µg/L	N/A
Haloacetonitriles	1.4 µg/L	0.6 µg/L	N/A
Haloketones	2.9 µg/L	0.8 µg/L	N/A
Total Organic Carbon	2.5 mg/L C	1.3 mg/L C	N/A
Tribromoacetic acid	3.0 µg/L	2.0 µg/L	N/A
Trichloroacetic Acid	17.1 µg/L	8.5 µg/L	N/A
Trichloro-2-propanone-1,1,1	2.1 µg/L	1.0 µg/L	N/A

Results of Analysis After Treatment: Distribution System

PARAMETER	MAXIMUM AMOUNT DETECTED	YEARLY AVERAGE AMOUNT	MAXIMUM ACCEPTED CONCENTRATION (MAC)
Microbiological			
Total Coliform bacteria	1.6% of samples in a month > 1 per 100 mL	0.5% of samples in a month > 1 per 100 mL	No consecutive samples should contain coliforms
Fecal Coliform bacteria	Not detected	Not detected	Not detected
<i>E. coli</i> bacteria	0.8 % of samples in one month > 1 per 100 mL	1 positive in the year	Not detected
Physical/Chemical			
Chlorine Residual	1.95 mg/L	1.54 mg/L	Range 0.5 - 2.5 mg/L
Turbidity	40.5 NTU (98.6% of samples are < 5.0 NTU)	0.42 NTU (95.5% of samples are < 1.0 NTU)	5.0 NTU

List of Water Quality Violations for the Year 2004

DATE	VIOLATION	TYPE OF PROBLEM	LOCATION	SOLUTION
January 21	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean in < 24 hrs
April 7	Colour high and turbidity > 5 NTU	Complaint Use of fire hydrant	Distribution System Local	Flushed clean in < 24 hrs
April 7	Low chlorine residual	Mainbreak Closed valve	Distribution System Local	Flushed to normal within 4 hrs
April 14	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean in < 24 hrs
April 19	Turbidity > 5 NTU	Complaint Hydrant use	Distribution System Local	Flushed clean in < 24 hrs
May 3	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
June 21	Turbidity > 5 NTU	Complaint Valve failure	Distribution System Local	Flushed clean within 24 hrs
June 29	Low chlorine < 0.5	Complaint Low flow area	Distribution System Local	Flushed to normal within 4 hrs
July 12	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
July 26	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
August 5	Low chlorine	Complaint	Distribution System Local	Flushed to normal within 4 hrs
August 18	Turbidity > 5 NTU	Complaint High flows in area	Distribution System Local	Flushed clean within 24 hrs
September 3	Positive <i>E.coli</i>	Mainbreak repair (one sample)	Distribution System Local	Flushed clean within 24 hrs
September 11	Turbidity > 5 NTU	Complaint Valve operation	Distribution System Local	Flushed clean within 24 hrs
September 21	Low chlorine < 0.5 mg/L	Complaint Valve setting	Distribution System Local	Flushed to normal in 24 hrs
September 21	Turbidity > 5 NTU Valve setting	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 6	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 13	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 13	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 21	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 25	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 25	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
October 28	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
November 20	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
November 25	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
November 26	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed clean within 24 hrs
December 13	Turbidity > 5 NTU	Mainbreak	Distribution System Local	Flushed Clean within 24 hrs
December 20	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed Clean within 24 hrs
December 21	Turbidity > 5 NTU	Complaint	Distribution System Local	Flushed Clean within 24 hrs

List of Environmental & Administrative Reporting Violations for the Year 2004

DATE	VIOLATION	TYPE OF PROBLEM	LOCATION	SOLUTION
January 20	Discharge of high pH water to river	Switching of caustic soda feed lines	Rossdale Water Plant	Corrected within 1 hr
January 28	Discharge of high pH water to the river	Startup of caustic soda feed system	E.L. Smith Water Plant	Corrected within 1 hr
February 3	Discharge of high pH water to the river	Switching of caustic soda feed lines	E.L. Smith Water Plant	Corrected within 1 hr
April 26	UV reactor Flow	Exceeded max flow of 120 ML/d	E.L. Smith Water Plant	Confirm max flow allowable
May 15	Particle Counter	Unplugged unit	Rossdale Water Plant	Corrected within 8 hrs
May 17	UV reactor Flow	Exceeded max flow of 120 ML/d	E.L. Smith Water Plant	Confirm max flow allowable
June 15	Failure to Monitor UV light transmittance	Sample not collected	E.L. Smith Water Plant	Procedures reinforced
June 16	Failure to monitor Res Effluent residual	Fluoride monitor - no flow	E.L. Smith Water Plant	Corrected within 24 hrs
June 23	Chlorine release in chlorinator room	Chlorine gas for 1 hour (1 ppm)	E.L. Smith Water Plant	Corrected within 1 hr
June 29	Fluoride spill onsite	65L spill from truck unloading	E.L. Smith Water Plant	Contained, cleaned up.
August 3	Caustic soda spill 75-100 L	Spill onsite during truck unloading	E.L. Smith Water Plant	Contained, cleaned up.
August 13	Failure to monitor turbidity/particle counts	Online units not operational	Rossdale Water Plant	Corrected within 1 hr
August 16	Hypochlorite spill to river	65 L spill during filter cleaning	Rossdale Water Plant	Reviewed procedures
September 8	Failure to monitor	Filter 6 turbidity	Rossdale Water Plant	Corrected within 24 hrs
September 17	Failure to monitor chlorine – no flow	Filter effluent	Rossdale Water Plant	Corrected within 2 hrs
October 15	Failure to monitor malfunction	Filter 6 turbidity	Rossdale Water Plant	Corrected within 12 hrs
October 30	Failure to monitor counts – no flow	Filter 5 particle	Rossdale Water Plant	Corrected within 6 hrs
November 16	Failure to monitor turbidity- no flow	Combined filter	Rossdale Water Plant	Corrected within 12 hrs
December 3	Failure to monitor failed	Chlorine analyzer	Rossdale Water Plant	Corrected within 24 hrs
December 9	Failure to report correct data points	Fluoride and pH	Rossdale Water Plant	Corrected
December 15	Failure to monitor	Filter effluent turbidity – no flow	Rossdale Water Plant	Corrected
December 19	Failure to monitor	Filter 9 turbidity	E.L. Smith Water Plant	Corrected within 24 hrs
December 22	Domestic wastewater Spill from truck	Small spill onsite 20 L	E.L. Smith water Plant	Contained, cleaned up within 4 hrs



Results of Analysis After Treatment (Regulated Parameters Which Are Not Detected) – 2004

PARAMETER	DETECTION LIMIT	MAXIMUM ACCEPTABLE CONCENTRATION (MAC)	TYPE OF CONTAMINANT
Inorganic Parameters			
Antimony	0.003 mg/L	0.006 mg/L	Trace metal
Bromate	0.005 mg/L	0.01 mg/L	DBP
Bromide	0.01 mg/L	N/A	Anion
Cadmium	0.001 mg/L	0.005 mg/L	Trace metal
Chromium	0.001 mg/L	0.05 mg/L	Trace metal
Mercury	0.0002 mg/L	0.001 mg/L	Trace metal
Selenium	0.003 mg/L	0.01 mg/L	Trace metal
Sulphide	0.005 mg/L	0.05 mg/L	Trace inorganic

(REGULATED PARAMETERS WHICH ARE NOT DETECTED) – 2004

PARAMETER	DETECTION LIMIT	REGULATED MAC OR AO	TYPE OF CONTAMINANT
Organic Parameters			
Aldicarb	0.0001 mg/L	0.009 mg/L	Pesticide
Aldrin	0.000005 mg/L	0.0007 mg/L	Pesticide
Atrazine	0.000005 mg/L	0.005 mg/L	Pesticide
Azinphos-methyl (Guthion)	0.0002 mg/L	0.02 mg/L	Pesticide
Bendiocarb	0.0001 mg/L	0.04 mg/L	Pesticide
Benzene	0.0005 mg/L	0.005 mg/L	Solvent
Benzo(a)pyrene	0.00001 mg/L	0.00001 mg/L	PAH
Bromoxnil	0.000005 mg/L	0.005 mg/L	Pesticide
Carbaryl	0.0001 mg/L	0.09 mg/L	Pesticide
Carbofuran	0.0001 mg/L	0.09 mg/L	Pesticide
Carbon Tetrachloride	0.001 mg/L	0.005 mg/L	Solvent
Chlorpyrifos (Dursban)	0.000005 mg/L	0.09 mg/L	Pesticide
Cyanazine	0.00005 mg/L	0.01 mg/L	Pesticide
Diazinon	0.000005 mg/L	0.02 mg/L	Pesticide
Dicamba (Banvel)	0.000005 mg/L	0.12 mg/L	Pesticide
Dichlorobenzene-1,2	0.0005 mg/L	0.2 mg/L	Solvent
Dichlorobenzene-1,4	0.0005 mg/L	0.005 mg/L	Solvent
Dichloroethane-1,2	0.0005 mg/L	0.005 mg/L	Solvent
Dichloroethylene-1,1	0.003 mg/L	0.014 mg/L	Solvent
Dichloromethane	0.0005 mg/L	0.05 mg/L	Solvent
Dichlorophenol-2,4	0.0001 mg/L	0.9 mg/L	Phenol
Dichlorophenoxyacetic acid (2,4-D)	0.000005 mg/L	0.1 mg/L	Pesticide
Diclofop-methyl	0.00002 mg/L	0.009 mg/L	Pesticide
Dieldrin	0.000005 mg/L	0.0007 mg/L	Pesticide
Dimethoate (Cygon)	0.00005 mg/L	0.02 mg/L	Pesticide
Diquat	0.006 mg/L	0.07 mg/L	Pesticide
Diuron	0.0002 mg/L	0.15 mg/L	Pesticide
Ethylbenzene	0.0005 mg/L	0.0024 mg/L	Solvent
Glyphosate	0.003 mg/L	0.28 mg/L	Pesticide
Malathion	0.00005 mg/L	0.19 mg/L	Pesticide
Methoxychlor	0.00003 mg/L	0.9 mg/L	Pesticide
Metolachlor	0.000005 mg/L	0.05 mg/L	Pesticide
Metribuzin	0.00001 mg/L	0.08 mg/L	Pesticide
Microcystin LR	0.0005 mg/L	0.0015 mg/L	Algal toxins
Monochlorobenzene	0.0005 mg/L	0.08 mg/L	Solvent
Nitritotriacetic Acid(NTA)	0.2 mg/L	0.4 mg/L	Detergent
Paraquat	0.009 mg/L	0.01 mg/L	Pesticide
Parathion	0.00001 mg/L	0.05 mg/L	Pesticide

PARAMETER	DETECTION LIMIT	REGULATED MAC OR AO	TYPE OF CONTAMINANT
Organic Parameters			
Pentachlorophenol	0.0001 mg/L	0.06 mg/L	Phenol
Phorate (Thimet)	0.000005 mg/L	0.002 mg/L	Pesticide
Picloram (Tordon)	0.000005 mg/L	0.19 mg/L	Pesticide
Simazine	0.00001 mg/L	0.01 mg/L	Pesticide
Tetrachloroethylene	0.0005 mg/L	0.03 mg/L	Solvent
Terbufos	0.00003 mg/L	0.001 mg/L	Pesticide
Tetrachlorophenol-2,3,4,6	0.001 mg/L	0.1 mg/L	Phenol
Toluene	0.0005 mg/L	0.024 mg/L	Solvent
Trichloroethylene	0.0005 mg/L	0.05 mg/L	Solvent
Trichlorophenol-2,4,6	0.0001 mg/L	0.005 mg/L	Phenol
Trifluralin (Treflan)	0.000005 mg/L	0.045 mg/L	Pesticide
Vinyl Chloride	0.0001 mg/L	0.002 mg/L	Solvent
Xylenes (1,4- and 1,2-)	0.0005 mg/L	0.3 mg/L	Solvent

(NON-REGULATED PARAMETERS WHICH ARE NOT DETECTED) –2004

PARAMETER	DETECTION LIMIT	TYPE OF CONTAMINANT
Organic Parameters		
Acenaphthene	0.0001 mg/L	PAH
Acenaphthylene	0.0001 mg/L	PAH
Acetylsalicylic acid	0.00001 mg/L	Drug
Alpha-BHC	0.000005 mg/L	Pesticide
Alpha-Endosulfan	0.000005 mg/L	Pesticide
Androsterone	0.0005 mg/L	Drug
Anthracene	0.0001 mg/L	PAH
Bentazon	0.000005 mg/L	Drug
Benzidene	0.0002 mg/L	Chemical
Benzoanthracene	0.0002 mg/L	PAH
Benzo(b)fluoranthene	0.0001 mg/L	PAH
Benzo(ghi)perylene	0.0002 mg/L	PAH
Benzo(k)fluoranthene	0.0001 mg/L	PAH
Bezafibrate	0.0001 mg/L	Drug
Bis(2-chloroethoxy)methane	0.0001 mg/L	Chemical
Bis(2chloroethyl)ether	0.0001 mg/L	Chemical
Bis(2-chloroisopropyl)ether	0.0001 mg/L	Chemical
Bis(2-ethylhexy)phthalate	0.0001 mg/L	Plasticizer
Bromophenyl phenyl ether, 4-	0.0001 mg/L	Chemical
Bromochloroacetic acid	0.001 mg/L	HAA
Bromochloroacetonitrile	0.0005 mg/L	DBP
Bromodichloroacetic acid	0.001 mg/L	HAA
Bromacil	0.00003 mg/L	Pesticide
Bromoform	0.001 mg/L	DBP
Bromophenyl phenyl ether	0.0001 mg/L	Chemical
Butylbenzylphthalate	0.0001 mg/L	Plasticizer
Carbamazepine	0.00001 mg/L	Drug
Carbathiin (Carboxin)	0.0001 mg/L	Pesticide
Carbofuran, 3-hydroxy	0.0001 mg/L	Pesticide
Chlorodibromoacetic acid	0.003 mg/L	HAA
Chloro-3-methylphenol, 4-	0.0001 mg/L	Chemical
Chloronaphthalene, 2-	0.0001 mg/L	PAH
Chlorophenol, 2-	0.0002 mg/L	Chemical
Chlorophenyl phenyl ether, 4-	0.0001 mg/L	Chemical
Chloropicrin	0.0005 mg/L	DBP
Chlorothalonil	0.0001 mg/L	Pesticide
Chlortetracycline	0.0003 mg/L	Drug
Chrysene	0.0001 mg/L	PAH

PARAMETER	DETECTION LIMIT	TYPE OF CONTAMINANT
Organic Parameters		
Clodinafop metabolite	0.00002 mg/L	Pesticide
Clodinafop-propargyl	0.00002 mg/L	Pesticide
Clofibric Acid	0.00001 mg/L	Drug
Clopyralid (Lontrel)	0.00002 mg/L	Pesticide
Cotinine	0.00001 mg/L	Drug
Cyclophosphamide	0.000015 mg/L	Drug
Dichloroethylene-cis 1,2	0.0005 mg/L	Solvent
Dichloroethylene-trans 1,2	0.0005 mg/L	Solvent
Dichloropropane 1,2	0.0005 mg/L	Chemical
Dibenzo(ah)anthracene	0.0005 mg/L	PAH
Dibromoacetic acid	0.001 mg/L	HAA
Dibromoacetonitrile	0.0005 mg/L	DBP
Dibromochloromethane	0.0005 mg/L	DBP
Dichlorophenoxybutyric acid (2,4-DB)	0.000005 mg/L	Pesticide
Dichlorophenoxypropionic acid (2,4-DP)	0.000005 mg/L	Pesticide
Dichloropropane 1,2-	0.0005 mg/L	DBP
Diclofenac	0.0001 mg/L	Pesticide
Diclofop-methyl	0.00002 mg/L	Pesticide
Diethylphthalate	0.0001 mg/L	Plasticizer
Dimethylphthalate	0.0001 mg/L	Plasticizer
Dimethylphenol, 2,4-	0.0002 mg/L	Chemical
Di-n-butylphthalate	0.0001 mg/L	Plasticizer
Di-n-octylphthalate	0.0001 mg/L	Plasticizer
Dinitrophenol, 2,4-	0.0001 mg/L	Chemical
Dinitrotoluene, 2,6-	0.0001 mg/L	Chemical
Di-n-octylphthalate	0.0001 mg/L	Plasticizer
Diphenylhydrazine, 1,2-	0.0001 mg/L	Chemical
Disulfoton (Disyston)	0.0002 mg/L	Pesticide
Endosulfan (alpha)	0.000005 mg/L	Drug
Equilenin	0.0003 mg/L	Drug
Equilin	0.0025 mg/L	Drug
Estradiol (alpha)	0.0002 mg/L	Drug
Estradiol (beta)	0.0002 mg/L	Drug
Estriol	0.0006 mg/L	Drug
Estrone	0.00025 mg/L	Drug
Ethalfuralin (Edge)	0.000005 mg/L	Pesticide
Ethion	0.0001 mg/L	Pesticide
Ethofumesate	0.000005 mg/L	Pesticide

PARAMETER	DETECTION LIMIT	TYPE OF CONTAMINANT
Organic Parameters		
Ethynylestradiol, 17-alpha	0.0002 mg/L	Drug
Fenoprofen	0.000005 mg/L	Drug
Fenoxaprop-p-ethyl	0.00004 mg/L	Pesticide
Fluazifop	0.00001 mg/L	Pesticide
Fluoranthene	0.0001 mg/L	PAH
Fluorene	0.0001 mg/L	PAH
Fluorxypyr	0.00001 mg/L	Pesticide
Gamma-BHC (Lindane)	0.000005 mg/L	Pesticide
Gemfibrozil	0.000005 mg/L	Drug
Hexachlorobenzene	0.0001 mg/L	Pesticide
Hexachlorobutadiene	0.0005 mg/L	Chemical
Hexachloropentadiene	0.0001 mg/L	Chemical
Hexachloroethane	0.0005 mg/L	Chemical
Hexaconazole	0.00005 mg/L	Pesticide
Ibuprofen	0.000005 mg/L	Drug
Imazamethabenz-methyl	0.000005 mg/L	Drug
Imazamox	0.00002 mg/L	Pesticide
Imazethapyr	0.00002 mg/L	Pesticide
Indeno(1,2,3-c,d)pyrene	0.0001 mg/L	Pesticide
Indomethacin	0.00001 mg/L	Drug
Iprodione	0.00002 mg/L	Drug
Isophorone	0.0001 mg/L	Pesticide
Ketoprofen	0.00001 mg/L	Drug
Linuron	0.00002 mg/L	Pesticide
MCPA	0.00005 mg/L	Pesticide
MCPB	0.00002 mg/L	Pesticide
MCPP (Mecoprop)	0.00002 mg/L	Pesticide
Mestradial	0.0007	Drug
Metalaxyl	0.00001 mg/L	Pesticide
Methiocarb	0.0001 mg/L	Pesticide
Methomyl	0.0001 mg/L	Pesticide
Methyl-4,6-dinitrophenol, 2	0.00003 mg/L	Chemical
Monobromoacetic acid	0.001 mg/L	HAA
Monochloroacetic acid	0.002 mg/L	HAA
Methyl t-butyl ether (MTBE)	0.001 mg/L	Solvent
Naphthalene	0.0001 mg/L	PAH
Napropamide	0.00002 mg/L	Drug
Naproxen	0.000005 mg/L	Drug

PARAMETER	DETECTION LIMIT	TYPE OF CONTAMINANT
Organic Parameters		
Nitrobenzene	0.0001 mg/L	Solvent
Nitrophenol,2-	0.0001 mg/L	Chemical
Nitrophenol,4-	0.0001 mg/L	Chemical
N-nitroso-n-propylamine	0.0002 mg/L	Chemical
N-nitrosodiphenylamine	0.0001 mg/L	Chemical
Norethindrone	0.005 mg/L	Drug
Norflaxacin	0.00003 mg/L	Drug
Novobiocin	0.000015 mg/L	Drug
Oflaxacin	0.00003 mg/L	Drug
Oxamyl	0.0001 mg/L	Pesticide
Oxolinic Acid	0.000015 mg/L	Drug
Oxycarboxin	0.00005 mg/L	Pesticide
Oxtetracycline	0.00002 mg/L	Drug
Pentoxifylline	0.000002 mg/L	Drug
Phenanthrene	0.0001 mg/L	PAH
Phenol	0.0001 mg/L	Chemical
Pipemidic acid	0.000015 mg/L	Drug
Progesterone	0.005 mg/L	Drug
Propiconazole	0.00005 mg/L	Pesticide
Propoxur	0.0001 mg/L	Pesticide
Pyrene	0.0001 mg/L	PAH
Pyridaben	0.00002 mg/L	Pesticide
Quinchlorac	0.000005 mg/L	Pesticide
Quizalofop	0.00003 mg/L	Pesticide
Roxithromycin	0.000015 mg/L	Drug
Salicylic Acid	0.000025 mg/L	Drug
Sulfabenzamide	0.00001 mg/L	Drug
Sulfacetamide	0.000025 mg/L	Drug
Sulfachloropyradizine	0.00001 mg/L	Drug
Sulfadiazine	0.00001 mg/L	Drug
Sulfadimethoxine	0.00002 mg/L	Drug
Sulfaguanidine	0.000015 mg/L	Drug
Sulfamerazine	0.00001 mg/L	Drug
Sulfameter	0.000015 mg/L	Drug
Sulfamethazine	0.00002 mg/L	Drug
Sulfamethizole	0.000005 mg/L	Drug
Sulfamethoxazole	0.000005 mg/L	Drug
Sulfamethoxyipyridazine	0.00001 mg/L	Drug

PARAMETER	DETECTION LIMIT	TYPE OF CONTAMINANT
Organic Parameters		
Sulfamoxazole	0.000005 mg/L	Drug
Sulfaphenazole	0.00001 mg/L	Drug
Sulfapyridine	0.00001 mg/L	Drug
Sulfaquinoxaline	0.00001 mg/L	Drug
Sulfathiazole	0.00002 mg/L	Drug
Sulfisoxazole	0.00001 mg/L	Drug
Testosterone	0.0005 mg/L	Drug
Tetrachloroethane 1,1,2,2-	0.001 mg/L	Solvent
Tetracycline	0.00002 mg/L	Drug
Thiamethoxam	0.00005 mg/L	Drug
Triallate (Avadex bw)	0.000005 mg/L	Pesticide
Tribromoacetic acid	0.003 mg/L	HAA
Trichlopyr	0.00001 mg/L	Pesticide
Trichloroacetonitrile	0.0005 mg/L	DBP
Trichlorobenzene 1,2,4-	0.0005 mg/L	Solvent
Trichloroethane 1,1,1	0.0005 mg/L	Solvent
Trimethoprim	0.000005 mg/L	Drug

Notes:

HAA: Haloacetic acids

PAH: Polynuclear Aromatic Hydrocarbons

DBP: Halogenated Disinfection Byproduct

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