

P I N E L L A S C O U N T Y U T I L I T I E S

WATER QUALITY ANALYSIS TABLES FOR 1998

The following tables show the results of our monitoring as reported to the FDEP and the USEPA for monitoring year 1998*

As you can see by the tables below, the PCU system had NO VIOLATIONS. The PCU team of water quality experts has tested for over 550 contaminants, of which over 520 were NOT DETECTED at any level in the water supply. Pinellas County Utilities routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 1998. As water travels over the land or underground it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

Primary (Health Related) Contaminants are health-related standards established by federal and state agencies.

MICROBIOLOGICAL CONTAMINANTS, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Contaminant and Unit of Measurement	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	NO	0% of positive samples	0	0		For systems collecting at least 40 samples per month: Presence of coliform bacteria in more than 5% of monthly samples Naturally present in the environment
Fecal Coliform and E. Coli	NO	0 positive samples	0	0		Any fecal coliform positive repeat sample, or e. coli positive repeat sample, or any total coliform positive repeat sample following a fecal coliform positive or e. coli positive routine sample is an MCL violation Human and animal fecal waste

RADIOLOGICAL CONTAMINANTS can be naturally-occurring or be the result of oil and gas production and mining activities.

Contaminant and Unit of Measurement	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Alpha (pCi/l) 1996*	NO	1.5	1.0-1.5	0	15	Erosion of natural deposits

INORGANIC CONTAMINANTS such as salts and metals, can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Contaminant and Unit of Measurement	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Barium (ppm) 1996*	NO	0.04	0.03 - 0.04	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper (tap water) (ppm) 1997*	NO	0.83	0 sites above the action level	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion or natural deposits; leaching from wood preservatives
Fluoride (ppm) 1996*	NO	0.22	0.11 - 0.22	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (tap water) (ppm) 1997*	NO	3	2 sites above the action level	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate (ppm) (as Nitrogen)	NO	0.05	0-0.05	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm) 1996*	NO	15	11-15	N/A	160	Salt water intrusion, leaching from soil.

VOLATILE ORGANIC CONTAMINANTS are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Contaminant and Unit of Measurement	MCL/AL Violation	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Carbon tetrachloride (ppb)	NO	0.30	0.12-1.07	0	5	Discharge from chemical plants and other industrial activities
Total Trihalomethanes (TTHMs) (ppb)	NO	71	68 -74	0	100	By-product of drinking water chlorination

Secondary (Non-Health Related) Contaminants aesthetic parameters which can effect taste, color and odor.

SECONDARY CONTAMINANTS

Contaminant and Unit of Measurement	MCL/AL Violation	Level Detected	Range	MCL	Likely Source of Contamination
Aluminum (ppm) 1996*	NO	0.003	0.002-0.003	0.2	Natural occurrence from soil leaching.
Chloride (ppm) 1996*	NO	20	11-20	250	Natural occurrence from soil leaching.
Color 1996* Color units	NO	5	N/A	15	Natural occurrence from soil leaching, naturally occurring organics.
Copper (ppm) 1996*	NO	0.01	N/A	1	Natural occurrence from soil leaching.
Iron (ppm) 1996*	NO	0.08	0.02-0.08	0.3	Natural occurrence from soil leaching.
Manganese (ppm) 1996*	NO	0.01	0.001-0.01	0.05	Natural occurrence from soil leaching
Odor 1996* Threshold odor number	NO	2	0-2	3	Natural occurrence from soil leaching, naturally occurring organics.
Zinc (ppm) 1996*	NO	0.001	N/A	5	Natural occurrence from soil leaching.
Sulfate (ppm) 1996*	NO	1	N/A	250	Natural occurrence from soil leaching.
Total Dissolved Solids (ppm) 1996*	NO	268	266-268	500	Natural occurrence from soil leaching.

Unregulated Organic Contaminants are monitored per EPA guidelines, however there are currently no regulated maximum contaminant.

UNREGULATED ORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	MCL Violation	Level Detected	Range	Reason PCU tested for unregulated contaminant
1,1,1,2-tetrachloroethane (ppb) 1996*	NO	0.16	0.12 - 0.19	To evaluate which compounds should be considered regulated compounds.
Bromodichloromethane (ppb) 1996*	NO	2.91	0.09 - 5.72	To evaluate which compounds should be considered regulated compounds.
Chloroform (ppb) 1996*	NO	23.2	17.4 - 28.9	To evaluate which compounds should be considered regulated compounds.
Dibromochloromethane (ppb) 1996*	NO	1.61	1.57 - 1.66	To evaluate which compounds should be considered regulated compounds.

Information Collection Rule (ICR) were collected to contribute to a national data gathering effort undertaken USEPA to determine the occurrence of the selected contaminants in drinking water.

Inorganic Contaminants

Contaminant and Unit of Measurement 1998	MCL Violation	Level Detected	Range
Alkalinity (ppm)	N/A	207	91-227
Bromine (ppm)	N/A	0.040	0.029-0.075
Ammonia (ppm)	N/A	0.46	0.02-0.61
Total Organic Carbon (TOC) (ppm)	N/A	4.1	3.1-6.0
Total Hardness (ppm)	N/A	217	190-306
Total Organic Halogen (TOX) (ppb)	N/A	152	0.10-465
Turbidity (NTU)	N/A	0.412	0.09-0.785
UV-254 (cm ⁻¹)	N/A	0.126	0.078-0.770

Organic Contaminants (Disinfection by-products) (ppm)

Contaminant and Unit of Measurement 1998	MCL Violation	Level Detected	Range
1,1-Dichloropropanone (ppb)	N/A	0.572	0.062-1.78
Bromochloroacetonitrile (ppb)	N/A	2.21	0-3.84
Bromodichloromethane (ppb)	N/A	10.8	3.82-19.1
Bromoform (ppb)	N/A	0.208	0.023-0.732
Chloral Hydrate (ppb)	N/A	6.95	0.632-17.7
Chloroform (ppb)	N/A	54.2	16.1-163
Chloropicrin (ppb)	N/A	0.126	0-0.298
Dibromoacetonitrile (ppb)	N/A	0.454	0-1.01
Dibromochloromethane (ppb)	N/A	1.61	0.154-3.24
Dichloroacetonitrile (ppb)	N/A	9.20	1.92-19.7
Trichloroethene (ppb)	N/A	0	0
Trichloroacetonitrile (ppb)	N/A	0.069	0-0.254
Trichloropropanone (ppb)	N/A	2.70	0.082-2.61
Total Trihalomethanes (TTHMs) (ppb)	N/A	66.8	21.0-184

Field Parameters

Parameter and Unit of Measurement 1998	MCL Violation	Level Detected	Range
Cl ₂ R-Free (ppm)	N/A	1.88	0.20-4.40
Cl ₂ R-Total (ppm)	N/A	2.34	0.400-11.0
Conductivity (umhos/cm)	N/A	417	303-465
pH	N/A	7.68	7.20-8.05
Temperature (°C)	N/A	25.8	21.1-31.6
Cl Demand (ppm)	N/A	8.61	6.72-11
Cl Dose (ppm)	N/A	8.58	6.20-11.9

Organic Contaminants (Haloacetic Acids) (ppb)

Contaminant and Unit of Measurement 1998	MCL Violation	Level Detected	Range
Bromochloroacetic Acid (ppb)	N/A	2.88	0.75-6.00
Bromodichloroacetic Acid (ppb)	N/A	5.74	0.66-12.3
Chlorodibromoacetic Acid (ppb)	N/A	3.19	0.36-11.0
Dalapon (ppb)	N/A	1.39	0.42-2.72
Dibromoacetic Acid (ppb)	N/A	0.34	0-1.00
Dichloroacetic Acid (ppb)	N/A	18.7	5.86-40.6
Monobromoacetic Acid (ppb)	N/A	0.12	0-0.92
Monochloroacetic Acid (ppb)	N/A	2.26	0.38-5.87
Trichloroacetic Acid (ppb)	N/A	31.5	7.41-65.8

Metal Contaminants

Contaminant and Unit of Measurement 1998	MCL Violation	Level Detected	Range
Calcium (ppm)	N/A	77.3	68.3-85.7
Magnesium (ppm)	N/A	4.86	4.38-5.45

*PCU is required to report the results of water quality testing to the DEP and the USEPA less frequently for certain contaminants. The dates of the last reported sample appear in this report. Customers interested in receiving more recent data should contact the PCU Customer Service Department at 727/464-4714.

Studies to Reduce Disinfection By-Products (DBP's)

In 1995, the USEPA promulgated the Information Collection Rule (ICR) which requires large community systems to collect data on DBPs in drinking water and requires certain systems to study ways to reduce DBPs. A provision of the ICR is that DBP reduction studies completed before the ICR could be grandfathered in lieu of a new study provided the rigorous requirements of the ICR were met. As an example of Pinellas County continuing to set the standard in America, Pinellas County submitted two studies from the S.K. Keller Plants I and II for consideration by the USEPA, both of which met ICR requirements and were accepted. Nationally, Pinellas County's studies from S.K. Keller Plants I & II were two of the eight studies under the ICR's grandfathering provision accepted, and were the only studies accepted relating to groundwater sources.

Water Quality TERMS TO KNOW

In these tables you may find many terms and abbreviations that you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Action Level, (AL):

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level, (MCL):

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.

Maximum Contaminant Level Goal, (MCLG):

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.

Parts Per Million, (ppm), or Milligrams per Liter, (mg/L):

One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts Per Billion, (ppb), or Micrograms Per Liter, (ug/L):

One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

Picocuries Per Liter (pCi/L):

A measure of radiation.

Primary Contaminants:

Health-related standards established by federal and state agencies.

Secondary Contaminants:

Constituents which affect taste, odor, and appearance (color). These are not considered a health concern.

Total Dissolved Solids, (TDS):

An overall indicator of the amount of minerals in water.

Total Trihalomethanes, (TTHMs):

A group of disinfection by-products formed as a result of the chlorination of water.

Micro mhos per centimeter, (umhos/cm):

A measure of the ionic conductivity of the water.

pH:

A measure of the hydrogen ion concentration in water which determines whether it is acidic or basic (alkaline).

Chlorine Residual, (Cl₂R):

The amount of chlorine in water that is available for disinfection.

Chlorine, (Cl):

An element used in gaseous form that readily combines with other elements in water.

Degrees Celsius, (°C):

The metric scale used to measure temperature.

Non-detects, (ND):

Laboratory analysis indicates that the constituent is not present.

MCL's And Possible Health Effects

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described effect.

Make An Informed Water Quality Decision!

If you have questions or concerns about your water quality, contact the Pinellas County Utilities Laboratory at 727/582-2302. To check complaints against water conditioning businesses, call the Pinellas County Department of Consumer Protection at 727/464-6200.

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 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 healthcare providers. USEPA/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.



At Pinellas County Utilities, we value our customers and work hard to ensure your satisfaction. If you have questions or comments about this report or other issues, please call us:
 Utilities Laboratory 727/582-2302
 Customer Service 727/464-4714
 Water Conservation 727/464-3896
 Emergencies 727/582-2200
 After Hour Emergencies 727/582-2300
 The PCU Water System is staffed 24 hours a day, 7 days a week.

You can also visit us on our website at <http://utility.co.pinellas.fl.us>.