

TVWD Water Supplies: Water Quality Comparisons

Inorganic Chemicals (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (Aug. 2004)	
		MRL	Bull Run	Columbia Wellfield	MRL	October 2003	April 2004	June 2004	MRL	Results
Antimony Total	0.006	0.003	<0.003	<0.003	0.0005	ND at MRL	ND at MRL	ND at MRL	0.001	ND at MRL
Arsenic	0.05	0.001	<0.001	<0.001	0.0005	ND at MRL	ND at MRL	ND at MRL	0.002	ND at MRL
Barium	2.0	0.002	<0.002	0.012	0.0002	0.0043	0.0045	0.0046	0.05	ND at MRL
Beryllium Total	0.004	0.0005	<0.0005	<0.0005	0.0005	ND at MRL	ND at MRL	ND at MRL	0.0005	ND at MRL
Bromate	---	---	---	---	0.05	ND at MRL	ND at MRL	0.12	---	ND: ARBL (Jan. 1999)
Cadmium	0.005	0.001	<0.001	<0.001	0.0002	ND at MRL	ND at MRL	ND at MRL	0.001	ND at MRL
Chromium	0.1	0.001	<0.001	<0.001	0.001	ND at MRL	ND at MRL	ND at MRL	0.002	ND at MRL
Cyanide	0.2	0.02	<0.025	<0.02	0.005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL (Aug. 2003)
Fluoride	4.0	0.05	<0.05	0.12	0.2	ND at MRL	ND at MRL	ND at MRL	0.5	ND at MRL
Lead	0.015	0.001	<0.001	<0.001	0.0002	0.0003	0.0005	0.0005	0.001	ND at MRL
Mercury	0.002	0.001	<0.001	<0.001	0.0004	ND at MRL	ND at MRL	ND at MRL	0.0002	ND at MRL
Nickel	0.1	0.002	<0.002	<0.002	0.01	ND at MRL	ND at MRL	0.0005	0.004	ND at MRL
Nitrate	10.0	0.01	0.01	0.60	0.1	0.3	0.3	0.3	0.5	0.6
Nitrate-Nitrite	10.0	0.01	0.01	0.60	0.1	0.3	0.3	0.3	---	0.6 (Feb. 2004)
Nitrite	1.0	0.005	<0.005	<0.005	0.1	ND at MRL	ND at MRL	ND at MRL	0.01	ND at MRL
Selenium	0.05	0.001	<0.001	<0.001	0.005	ND at MRL	ND at MRL	ND at MRL	0.002	ND at MRL
Sodium	---	0.01	12	12	2.0	11	7.0	1.0	0.05	8.75
Sulfate	250	1.0	<1.0	4.2	0.5	10	9.6	9.8	5	13
Thallium Total	0.002	0.0002	<0.0002	<0.001	0.0002	ND at MRL	ND at MRL	ND at MRL	0.0006	ND at MRL
Total Organic Carbon	---	0.1	2.0	0.46	0.8	ND at MRL	ND at MRL	ND at MRL	0.5	0.83

Regulated Volatile Organic Chemicals (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (Feb. 2004)	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
1,1 - Dichloroethylene	0.007	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,1,1 - Trichloroethane	0.2	0.0006	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,1,2 - Trichloroethane	0.005	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,2 Dichloroethane	0.005	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,2 Dichloropropane	0.005	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,2,4 - Trichlorobenzene	0.07	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Benzene	0.005	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Carbon Tetrachloride	0.005	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Cis - 1,2 - Dichloroethylene	0.07	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dichloromethane	0.005	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL (Jan. 1999)

MRL (Method reporting limit): The lowest level of a contaminant that can be reliably and consistently reported by the laboratory.

MRLs vary with the analytical test method and the established reporting convention of the laboratory.

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

ND at MRL: The contaminant was not detected at a level equal to or above the laboratory's method reporting limit.

ND: ARBL: Not detected as reported by lab. These values were reported as non-detected, but TVWD doesn't know the MRL.

<: Less than

---: The contaminant was not tested or was not reported to TVWD.

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.
1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (Feb. 2004)	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Ethylbenzene	0.7	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Monochlorobenzene	0.1	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL (Jan. 1999)
O-Dichlorobenzene	0.6	0.0006	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL (Jan. 1999)
P-Dichlorobenzene	0.075	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL (Jan. 1999)
Styrene	0.1	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Tetrachloroethylene	0.005	0.0006	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Toluene	1.0	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Total Xylenes	10	0.0005	0.0005	0.0005	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Trans – 1,2 – Dichloroethylene	0.1	0.0007	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Trichloroethylene	0.005	0.005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Vinyl Chloride	0.002	0.002	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL

Unregulated Volatile Organic Chemicals (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (Feb. 2004)	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Bromobenzene	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Bromodichloro Methane	---	0.0005	<MRL	<MRL	0.0005	0.0025	0.0026	0.002	---	0.0021
Bromoform	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Bromomethane	---	0.006	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Chloroethane	---	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Chloroform	---	0.0005	0.010	0.005	0.0005	0.0054	0.0037	0.0048	---	0.011
Chloromethane	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
2 - Chlorotoluene	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
4 - Chlorotoluene	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dibromochloro Methane	---	0.0012	<MRL	<MRL	0.0005	0.001	0.0006	0.0008	---	ND: ARBL
Dibromomethane	---	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,3 - Dichlorobenzene	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,1 - Dichloroethane	---	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,3 - Dichloropropane	---	0.0012	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
2,2 - Dichloropropane	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,1 - Dichloropropene	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
cis-1,3 - Dichloropropene	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,1,1,2 - Tetrachloroethane	---	0.0005	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,1,2,2 - Tetrachloroethane	---	0.001	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
1,2,3 - Trichlorobenzene	---	0.0006	<MRL	<MRL	---	---	---	---	---	---
1,2,3 - Trichloropropane	---	0.0006	<MRL	<MRL	0.0005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL

MRL (Method reporting limit): The lowest level of a contaminant that can be reliably and consistently reported by the laboratory.

MRLs vary with the analytical test method and the established reporting convention of the laboratory.

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

ND at MRL: The contaminant was not detected at a level equal to or above the laboratory's method reporting limit.

ND: ARBL: Not detected as reported by lab. These values were reported as non-detected, but TVWD doesn't know the MRL.

<: Less than

---: The contaminant was not tested or was not reported to TVWD.

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.
 1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Synthetic Organic Chemicals (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (July 2002)	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
2,4 – D	0.07	0.0002	<MRL	<MRL	0.0008	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
2,4,5 – TP Silvex	0.05	0.0004	<MRL	<MRL	0.0002	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Adipates	0.4	0.001	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Alachlor (Lasso)	0.002	0.004	<MRL	<MRL	0.0003	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Atrazine	0.003	0.002	<MRL	<MRL	0.0001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Benzo(A)Pyrene	0.0002	0.00004	<MRL	<MRL	0.000005	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
BHC – gamma (Lindane)	0.0002	0.00002	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Carbofuran	0.04	0.001	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Chlordane	0.002	0.004	<MRL	<MRL	0.0004	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dalapon	0.2	0.002	<MRL	<MRL	0.003	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dibromo chloropropane	0.0002	0.00002	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dinoseb	0.007	0.0004	<MRL	<MRL	0.0004	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Diquat	0.02	0.0004	<MRL	<MRL	0.0008	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Endothall	0.1	0.01	<MRL	<MRL	0.02	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Endrin	0.002	0.00002	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Ethylene Dibromide (EDB)	0.00005	0.00001	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Glyphosate	0.7	0.01	<MRL	<MRL	0.01	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Heptachlor Epoxide	0.0002	0.00002	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Heptachlor	0.0004	0.00004	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Hexachlorobenzene (HCB)	0.001	0.0001	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Hexachloro cyclopentadiene	0.05	0.0002	<MRL	<MRL	0.0001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Methoxychlor	0.04	0.0002	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Pentachlorophenol	0.001	0.00008	<MRL	<MRL	0.0002	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Phthalates	0.006	0.0013	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Picloram	0.5	0.0002	<MRL	<MRL	0.0002	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Polychlorinated Biphenyls	0.0005	0.0001	<MRL	<MRL	0.0002	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Simazine	0.004	0.0001	<MRL	<MRL	0.0001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Toxaphene	0.003	0.001	<MRL	<MRL	0.0006	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Vydate (Oxymyl)	0.2	0.002	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL

Unregulated Synthetic Organic Chemicals (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (July 2002)	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Butylbenzyl phthalate	---	0.0005	<MRL	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Di-n-butyl phthalate	---	0.0005	<MRL	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---

MRL (Method reporting limit): The lowest level of a contaminant that can be reliably and consistently reported by the laboratory.

MRLs vary with the analytical test method and the established reporting convention of the laboratory.

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

ND at MRL: The contaminant was not detected at a level equal to or above the laboratory's method reporting limit.

ND: ARBL: Not detected as reported by lab. These values were reported as non-detected, but TVWD doesn't know the MRL.

<: Less than

---: The contaminant was not tested or was not reported to TVWD.

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.

1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Contaminant (ppm – mg/L)	MCL	Portland Water Supply (Aug. 2003)			Willamette Water Supply				JWC (July 2002)	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Di-n-octylphthalate	---	0.0001	<MRL	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Diethyl phthalate	---	0.0005	<MRL	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Dimethyl phthalate	---	0.0005	<MRL	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Butachlor	---	0.001	<MRL	<MRL	0.0003	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Metolachlor	---	0.002	<MRL	<MRL	0.0003	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Metribuzin	---	0.001	<MRL	<MRL	0.0002	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Aldrin	---	0.0001	<MRL	<MRL	0.00001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dieldrin	---	0.0001	<MRL	<MRL	0.00006	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Propachlor	---	0.001	<MRL	---	0.06	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Dicamba	---	0.0005	<MRL	<MRL	0.002	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
3 – Hydroxycarbofuran	---	0.004	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Aldicarb	---	0.002	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Aldicarb sulfone	---	0.001	<MRL	<MRL	0.0007	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Aldicarb sulfoxide	---	0.003	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Carbaryl	---	0.004	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Methiocarb	---	0.002	<MRL	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Methomyl	---	0.004	<MRL	<MRL	0.001	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Paraquat	---	0.002	<MRL	---	0.002	ND at MRL	ND at MRL	ND at MRL	---	---

Microscopic Examination

	Portland Water Supply (Aug. 2003)				Willamette Water Supply (Treated Water)						JWC (Treated Water, August 2003)	
	Bull Run (Untreated Water)		Columbia Wellfield		Oct. 2003		April 2004		June 2004		Giardia	Crypto sporidium oocysts
	Giardia	Crypto sporidium oocysts	Giardia	Crypto sporidium oocysts	Giardia	Crypto sporidium oocysts	Giardia	Crypto sporidium oocysts	Giardia	Crypto sporidium oocysts		
Empty Cysts (no internal structure)	---	---	---	---	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL
Cysts/oocysts (amorphous internal structure (E))	---	---	---	---	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL
Cysts/oocysts (identifiable internal structure (F))	---	---	---	---	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL
Total Cysts/oocysts in sample	<2	<2	---	---	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL	ND: ARBL
Positive Internal Staining (B)	---	---	---	---	0	0	0	0	0	0	0	0
Positive Nuclei Staining (C)	---	---	---	---	0	0	0	0	0	0	0	0

MRL (Method reporting limit): The lowest level of a contaminant that can be reliably and consistently reported by the laboratory.
MRLs vary with the analytical test method and the established reporting convention of the laboratory.
MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water.
ND at MRL: The contaminant was not detected at a level equal to or above the laboratory's method reporting limit.
ND: ARBL: Not detected as reported by lab. These values were reported as non-detected, but TVWD doesn't know the MRL.
<: Less than
---: The contaminant was not tested or was not reported to TVWD.

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.
1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Microbiological

Contaminant	MCL	Portland Water Supply (Aug. 2003)		Willamette Water Supply			JWC (Continual)
		Bull Run	Columbia Wellfield	Oct. 2003	April 2004	June 2004	Results
E. coli	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Total Coliform	No more than 1 detected sample per month	Absent	Absent	Absent	Absent	Absent	Absent

Dioxin (Results Measured In mg/L*)

MCL	Portland Water Supply (1993)			Willamette Water Supply				JWC
0.00000003	MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	---
	0.000000007	<MRL	---	0.000000005	ND at MRL	ND at MRL	ND at MRL	ND at MRL

*1 mg/L is equivalent to 1 ppm

Disinfection By-products (Results Measured In PPB)*

Contaminant (ppb)	MCL	Portland Water Supply (Running average for 2004)	Willamette Water Supply (March 2005)	JWC (Running average for 2004)
		Meter Vault	Entry to Wilsonville Water System	Cornelius Pass
TTHMs	80 ppb	32.225 ppb (0.032225 mg/L)	5.62 ppb (0.00562 mg/L)	28.075 ppb (0.028075 mg/L)
HAAs	60 ppb	24.55 ppb (0.02455 mg/L)	ND	30.05 ppb (0.03005 mg/L)

* Portland and JWC Disinfection By-products were measured by TVWD at entry points to TVWD's water system. Willamette Disinfection By-products were measured at the entry point to the Wilsonville water system. TTHMs (Total Trihalomethanes) include Chloroform, Bromodichloromethane, Dibromochloromethane and Bromoform. HAAs (Haloacetic Acids) include Dibromoacetic Acid, Dichloroacetic Acid, Monobromoacetic Acid, Monochloroacetic Acid and Trichloroacetic Acid.

Secondary Contaminants (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply		Willamette Water Supply	JWC
		Lusted Hill Treatment Facility (Aug. 2004)	Groundwater Pump Station (July 2004)	Jan. 2005	Hillsboro Treatment Plant Finished Water (Aug. 2004)
Chloride	250	1.3	---	---	4
Hardness	250	7.9	66	23.2 – 28.2	26
Aluminum	0.05-0.20	0.030	---	ND	ND
Iron	0.3	0.092	0.052	ND	ND
Manganese	0.05	0.032	<0.01	0.004	ND
Silver	0.1	<0.001	---	ND	ND
Zinc	5	<0.10	---	ND	ND

MRL (Method reporting limit): The minimum amount detected by the testing equipment

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

ND at MRL = means the contaminant was not detected at the method reporting limit

--- means the contaminant was not tested or was not reported to TVWD

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.

1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Radionuclides*

Contaminant (pCi/L)	MCL	Portland Water Supply (Groundwater Pump Station, July 2003)	Willamette Water Supply (Sept. 2002)	JWC (Feb. 2003)
Gross Alpha	15	ND	1.2	ND
Combined Radium (226/228)	5	ND	0.9	ND
Combined Uranium	30	0.05	0.01	ND
Radon	---	25	---	---

* Radionuclides were measured in Picocuries per liter (pCi/L), a measure of radioactivity.

Extractable Organics (Results Measured In PPM)

Contaminant (ppm – mg/L)	MCL	Portland Water Supply			Willamette Water Supply				JWC	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Azinphos-methyl	---	---	---	---	0.001	ND at MRL	ND at MRL	ND at MRL	---	---
Bolstar	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Chlorpyrifos	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Coumaphos	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Demeton O-S	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Diazinon	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Dichlorvos	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Dimethoate	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Disulfoton	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
EPN	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Ethoprop	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Fensulfothion	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Fenthion	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Malathion	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Merphos	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Mevinphos	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Naled	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Parathion ethyl	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Parathion methyl	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Phorate	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---

MRL (Method reporting limit): The minimum amount detected by the testing equipment

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

ND at MRL = means the contaminant was not detected at the method reporting limit

--- means the contaminant was not tested or was not reported to TVWD

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.
 1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Contaminant (ppm – mg/L)	MCL	Portland Water Supply			Willamette Water Supply				JWC	
		MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Ronnel	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Stirofos	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Sulfotepp	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Tokuthion	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---
Trichloronate	---	---	---	---	0.0006	ND at MRL	ND at MRL	ND at MRL	---	---

Unregulated Contaminants (Results Measured In PPB)

Contaminant (ppb – ug/l)	Portland Water Supply (Jan. 2003)			Willamette Water Supply				JWC (Jan. 2003)	
	MRL	Bull Run	Columbia Wellfield	MRL	Oct. 2003	April 2004	June 2004	MRL	Results
Perchlorate	4.0	<MRL	---	4.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
2,4 – Dinitrotoluene	2.0	<MRL	---	2.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
2,6 – Dinitrotoluene	2.0	<MRL	---	2.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
4,4' – DDE	0.8	<MRL	---	0.8	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Acetochlor	2.0	<MRL	---	2.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
EPTC	1.0	<MRL	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Molinate	0.9	<MRL	---	0.9	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Terbacil	2.0	<MRL	---	2.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
DCPA (di-acid degradate)	1.0	<MRL	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
DCPA (mono-acid degradate)	---	<MRL	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
Total DCPA	---	---	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL
Methyl Tert-Butyl Ether	5.0	<MRL	---	5.0	ND at MRL	ND at MRL	ND at MRL	---	ND: ARBL (August 2003)
Nitrobenzene	10.0	<MRL	---	10.0	ND at MRL	ND at MRL	ND at MRL	---	---
Diuron	---	---	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
Linuron	---	---	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
2 – Methylphenol (o-Cresol)	---	---	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
2,4 – Dichlorophenol	---	---	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
2,4 – Dinitrophenol	---	---	---	5.0	ND at MRL	ND at MRL	ND at MRL	---	---
2,4,6 – Trichlorophenol	---	---	---	1.0	ND at MRL	ND at MRL	ND at MRL	---	---
1,2 – Diphenylhydrazine	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---
Diazinon	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---
Disulfoton	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---
Fonofos	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---
Nitrobenzene	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---
Prometon	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---
Terbufos	---	---	---	0.05	ND at MRL	ND at MRL	ND at MRL	---	---

MRL (Method reporting limit): The minimum amount detected by the testing equipment
MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water
ND at MRL = means the contaminant was not detected at the method reporting limit
--- means the contaminant was not tested or was not reported to TVWD

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.
1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.

Other Common Characteristics

Contaminant	MCL	Portland Water Supply		Willamette Water Supply	JWC
		Lusted Hill Treatment Facility (Aug. 2004)	Groundwater Pump Station (July 2004)	Range Of Samples Taken In 2004	Hillsboro Treatment Plant Finished Water (Aug. 2004)
Turbidity (NTU)	5	0.47 - 0.78 (Taken at Bull Run before treatment)	0.55	0.03 – 0.09	0.039
pH (Standard Units)	6.5 – 8.5	7.9	7.8	7.67 – 8.11	7.33
Total Dissolved Solids (ppm)	500	29	---	53.0 – 76.8	60
Color (Standard Units)	15	10	5	Never exceeded 0	ND
Specific Conductance/Conductivity (µmhos/cm)	---	32	179	79.5 – 115.2	89
Water Temperature (°C)	---	15.7	15.7	4.6 – 24.5	---
Suspended Solids (ppm)	---	1.0	---	---	ND
Total Solids (@ 180° C)	---	30	140	---	60

Last Revised: 7-14-05

MRL (Method reporting limit): The minimum amount detected by the testing equipment
MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water
ND at MRL = means the contaminant was not detected at the method reporting limit
--- means the contaminant was not tested or was not reported to TVWD

1 ppm means that one part of a particular contaminant is present for every 1 million (1,000,000) parts of water. 1 ppm is equivalent to 1 minute in 2 years, 1 cent in \$10,000 and 1 inch in 16 miles.
1 ppb = .001 ppm, which means that one part of a particular contaminant is present for every 1 billion (1,000,000,000) parts of water. 1 ppb is equivalent to 1 second in 32 years, 1 cent in \$10 million and 1 inch in 16,000 miles.