

Table 8
Recommended Analytes, Concentration Limits, and Monitoring Frequency
for Private Wells

Concentrations are in milligrams per liter (mg/l); to convert to micrograms per liter (ug/l) multiply concentration in mg/l by 1000.

Parameter	Recommended Concentration Limit	Recommended Sampling Frequency
Inorganic Compounds		Monitor initially for all compounds and then once every ten years if no detects, or as otherwise determined by the local Board of Health. Note: Nitrate and Nitrite should be monitored once every year.
Antimony	0.006 mg/l	
Arsenic	0.010 mg/l	
Asbestos	7 million fibers/l	
Barium	2 mg/l	
Beryllium	0.004 mg/l	
Cadmium	0.005 mg/l	
Chromium (total)	0.1 mg/l	
Cyanide (as free cyanide)	0.2 mg/l	
Fluoride	4 mg/l	
Lead (action level)	0.015 mg/l	
Copper (action level)	1.3 mg/l	
Manganese ¹	0.3 mg/l	
Mercury	0.002 mg/l	
Nitrate (N)	10 mg/l	
Nitrite (N)	1 mg/l	
Total Nitrate & Nitrite (N)	10 mg/l	
Perchlorate	0.002 mg/l	
Selenium	0.05 mg/l	
Sodium ²	20 mg/l ³	
Thallium	0.002 mg/l	
Turbidity		As determined by the local Board of Health.
Turbidity ⁴	1 NTU ⁵	

Table 8 Continued on next two pages

¹ EPA has set a lifetime Health Advisory value of 0.3 mg/l for Manganese to protect against concerns of potential neurological effects. This advisory is based on the health risks posed to children under the age of 1 and infants on formula by the ingestion of Manganese.

² Sodium guideline is based on an eight (8) ounce serving. This guideline was established to protect persons on sodium restricted diets. If the sodium concentration is above the guideline and a person using the water is on a sodium-restricted diet, that person's physician should be consulted as to whether the water should be consumed.

³ **ORSG:** Office of Research and Standards Guideline.

⁴ See the table and associated footnotes provided by EPA at <http://water.epa.gov/drink/contaminants/index.cfm> for a discussion of the concern for turbidity in drinking water and the recommended concentration limit.

⁵ NTU = Nephelometric turbidity unit.

Table 8 Continued:

Parameter	Recommended Concentration Limit	Recommended Sampling Frequency
Synthetic Organic Compounds (SOC) ⁵		<p>To reduce cost it is best to perform a monitoring screen initially using analytical method 505 or 508 and then once every ten years if no detects or as specified by the local Board of Health. The recommended monitoring screen won't provide analytical results for all of the SOC listed in Table 8. Monitoring for the remaining SOC should be considered if contaminants are detected in the monitoring screen. This approach is consistent with what MassDEP requires for SOC monitoring at public water supplies. Owners of wells in agricultural areas are encouraged to conduct more frequent testing.</p> <p>If private well owners decide to request laboratory analysis of all of the SOC listed in Table 8, MassDEP encourages them to request that the laboratory include analytical results for other synthetic organic compounds that the laboratory may normally include with the analysis of the synthetic organic compounds listed in this table at no additional cost.</p>
Alachlor	0.002 mg/l	
Atrazine	0.003 mg/l	
Benzo(a)pyrene	0.0002 mg/l	
Carbofuran	0.04 mg/l	
Chlordane	0.002 mg/l	
Dalapon	0.2 mg/l	
Di(2-ethylhexyl)adipate	0.4 mg/l	
Di(2-ethylhexyl) phthalate	0.006 mg/l	
Dinoseb	0.007 mg/l	
Diquat ⁶	0.02 mg/l	
1,2-Dibromo-3-chloropropane (DBCP)	0.0002 mg/l	
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.07 mg/l	
Endothall ⁶	0.1 mg/l	
Endrin	0.002 mg/l	
Ethylene Dibromide (EDB)	0.00002 mg/l	
Glyphosate ⁶	0.7 mg/l	
Heptachlor	0.0004 mg/l	
Heptachlor epoxide	0.0002 mg/l	
Hexachlorocyclopentadiene	0.001 mg/l	
Lindane	0.002 mg/l	
Methoxychlor	0.04 mg/l	
Oxamyl(Vydate)	0.2 mg/l	
Polychlorinated biphenyls (PCBs)	0.0005 mg/l	
Pentachlorophenol	0.001 mg/l	
Picloram	0.5 mg/l	
Simazine	0.004 mg/l	
2,3,7,8-TCDD (Dioxin)	3 x 10 ⁻⁸ mg/l	
Toxaphene	0.003 mg/l	
2,4,5-TP (Silvex)	0.05 mg/l	

⁵ The SOC monitoring requirements for public water supply wells typically only involve screening by analytical method 505 or 508. The screening analysis does not test for all SOC listed in this table.

Table 8 Continued:

Parameter		Recommended Concentration Limit	Recommended Sampling Frequency
Bacteria			<p>Monitor once every year, or as otherwise specified by the local Board of Health.</p> <p>Initial monitoring for <i>Cryptosporidium</i> and <i>Giardia lamblia</i> is only recommended if the source is surface water (e.g. spring) or a well located within 100 feet of a surface water body or is prone to flooding. It is recommended that additional monitoring occur after any flooding event in which the flood waters reach the well location, or as otherwise specified by the local Board of Health.</p>
Total Coliform Bacteria		Positive sample	
Enterococci		Positive sample	
<i>Cryptosporidium</i>		Positive sample	
<i>Giardia lamblia</i>		Positive sample	
Radionuclides			<p>Monitor for radionuclides initially and determine future sampling frequency based upon the results. If the gross alpha result is greater than 15 pCi/l then uranium testing should be performed. If the gross alpha result is greater than 5 pCi/l then Radium-226 and Radium-228 testing should be performed.</p>
Gross Alpha Activity		15 pCi/l	
Radium –226 & 228		5 pCi/l	
Uranium		0.03 mg/l	
Beta particle and photon radioactivity		4 mrem/year	
Radon 222 ⁶		10,000 pci/L	
Volatile Organic Compounds (VOC)			<p>Monitor initially for VOC and then once every 10 years if no detects, or as otherwise determined by the local Board of Health. Owners of wells in industrial or densely developed residential areas are encouraged to conduct more frequent testing.</p> <p>MassDEP encourages private well owners to request that the laboratory include analytical results for other volatile organic compounds that the laboratory may normally include with the analysis of the volatile organic compounds listed in this table at no additional cost.</p>
Benzene		0.005 mg/l	
Carbon Tetrachloride		0.005 mg/l	
Dichloromethane (methylene chloride)		0.005 mg/l	
1,2-Dichlorobenzene (o-DCB)		0.6 mg/l	
1,4-Dichlorobenzene (p-DCB)		0.005 mg/l	
1,2-Dichloroethane		0.005 mg/l	
1,2-Dichloroethylene (cis)		0.07 mg/l	
1,2-Dichloroethylene (trans)		0.1 mg/l	
1,1-Dichloroethylene		0.007 mg/l	
1,2-Dichloropropane		0.005 mg/l	
Ethylbenzene		0.7 mg/l	
Methyl Tertiary Butyl Ether (MTBE)		0.07 mg/l ⁷	
Monochlorobenzene (chlorobenzene)		0.1 mg/l	
Styrene		0.1 mg/l	
Tetrachloroethylene (PCE)		0.005 mg/l	
Toluene		1 mg/l	
Trichloroethylene (TCE)		0.005 mg/l	
1,1,1-Trichloroethane (1,1,1-TCA)		0.2 mg/l	
1,2,4-Trichlorobenzene		0.07 mg/l	
1,1,2-Trichloroethane		0.005 mg/l	
Vinyl Chloride (VC)		0.002 mg/l	
Xylenes (total)		10 mg/l	

⁶ Exceedance of this guideline indicates that air sampling for Radon-222 should be done and you should contact your local Board of Health for more information. EPA proposed new guidelines for radon (64 FR