Connecticut Department of Public Health

Action Level List for Private Wells

Groundwater in Connecticut can be affected by chemical contamination from recent or historic releases involving pesticides, industrial chemicals, fuel products, landfills and other sources. Depending on the volume spilled, local conditions, and nature of the substance, the result can be groundwater contamination. Such contamination may present a health risk to those who use private wells as a source of water for drinking, bathing, washing, or cooking.

The Connecticut Department of Public Health (CT DPH) establishes drinking water Action Levels that are protective of public health and also feasible based upon analytical detection and treatment technology. If well contamination exceeds the value shown on the Action Level List (see below), the Connecticut Department of Energy and Environmental Protection (CT DEEP) is authorized to take further action in addressing groundwater contamination at this site. Additionally, the list provides guidance to local health departments and citizens when evaluating the potability of water from private wells. The Action Level list includes the most common groundwater contaminants. CT DPH is available to make determinations for additional chemicals if found in Connecticut groundwater.

The following list includes the Action Level itself and recommended laboratory methods to detect the contaminant at the Action Level. If you have questions about the Action Level List call the Environmental and Occupational Health Section of CT DPH (860-509-7740). For questions about analytical methods call CT DPH's Laboratory Certification Program (860-509-7389). If your well is contaminated with a chemical on the Action Level List, you should inform your local health department and CT DEEP (860-424-3705).

Chemical Contaminant	CT Action Level (µg/L)	Analytical Method[1]	Date of Revision
arsenic	**10**	200.5, 200.8, 200.9, SM 3113B	2004
barium	**2000**	200.7, 200.8, SM 3113B	2004
benzene	**1**	524.2, 524.3	2004
carbon tetrachloride	**0.5**	524.2, 524.3	2012
chlordane (technical)	**0.3**	505, 508, 508.1	2004
chromium (total)	**15**	200.7, 200.8, 200.9, SM 3113B	2012
1,4-dichlorobenzene	**5**	524.2, 524.3	2012
1,2-dichloroethane	**0.5**	524.2, 524.3	2012
dichloromethane	**5**	524.2, 524.3	2004
2,4-dichlorophenoxyacetic acid (2,4 – D)	**70**	515 (.1 – .4), 555	2004
1,2-dichloropropane	**1**	524.2, 524.3	2012

Chemical Contaminant	CT Action Level (µg/L)	Analytical Methods[1]	Date of Revision
1,1-dichloroethane	**25**	524.2, 524.3	2004
1,1-dichloroethylene	**7**	524.2, 524.3	2004
dieldrin	**0.03**	505, 508, 508.1	2004
1,4-dioxane	**3**	524.3, 8260B (modified)	2012
endrin	**2**	505, 508, 508.1	2004
ethylene dibromide (EDB)	**0.05[2]**	504, 524.3, 551.1	2004
isopropanol	**2300**	524.3, 8260B	2004
lead	**15**	200.5, 200.8, 200.9, SM 3113B	2004
manganese	**300**	200.7, 200.8, 200.9, SM 311B	Feb 2019
mercury	**2**	245.1, 245.2, 200.8	2004
methoxychlor	**40**	505, 508, 508.1	2004
methyl t-butyl ether (MTBE)	**70**	524.2, 524.3	2004
nitrate nitrogen	**10,000**	300.0, 353.3	2004
nitrite nitrogen	**1000**	300.0, 353.3	2004
Perfluorinated alkyl substances (sum of PFOS, PFOA, PFNA, PFHxS, PFHpA)[3]	**0.07**	537	2016
polychlorinated biphenyls (PCBs)	**0.2**	505, 508, 508.1	2012
selenium	**50**	200.5, 200.8, 200.9, SM 3113B	2004
Silvex	**50**	515 (.1 – .4), 555	2004
tertiary-butyl alcohol (TBA) (total oxygenates)[4]	**100**	524.2, 524.3	2004
tetrachloroethylene	**5**	524.2, 524.3	2004
toluene	**150**	524.2, 524.3	2012
total petroleum hydrocarbon (TPH)	**250[5]**	EPH/VPH or ETPH[5]	2012
1,1,1-trichloroethane	**200**	524.2, 524.3	2004
trichloroethylene	**1**	524.2, 524.3	2012
1,2,3-trichloropropane	**0.05**	504, 524.3, 551.1	2004
vinyl chloride	**0.5**	524.2, 524.3	2012

[1] EPA-approved Drinking Water Analytical Methods (for detailed methods, click the hyperlink "Analytical Methods"). SM designation indicates APHA/AWWA Standard Methods for the Examination of Water and Wastewater.

[2] EDB Action Level is the same value as the federal MCL, based upon EDB detection limits established in the past. However, the current detection limit is 0.02 µg/L. Detections between 0.02 and 0.05 µg/L should receive follow-up monitoring, and can be referred to DPH for possible follow-up actions.

[3] PFAS (perfluorinated alkyl substances) abbreviations: PFOS: perfluorooctanesulfonate; PFOA: perfluorooctanoic acid; PFNA: perfluorononanoic acid; PFHxS: perfluorohexanesulfonate; PFHpA: perfluoroheptanoic acid.

[4] If the TBA concentration alone, or the sum of all oxygenates in the sample equals 100 µg/L, additional action is recommended (e.g., follow-up monitoring, evaluation of sources and mitigation/treatment options, and possible provision of alternative water supply). List of oxygenates: TBA, MTBE, ethyl-t-butyl ether (ETBE), t-amyl-methyl ether (TAME), diisopropyl ether (DIPE).

[5] Action Level pertains to TPH as detected by the CT DEEP's ETPH method, Extractable Petroleum Hydrocarbon Fractions using the ETPH Analytical Method and Criteria Development. If the EPH/VPH method is used instead, the Action Level for individual fractions is between 100 to 1000 µg/L, as described by the groundwater protection criteria for these fractions. See Table 5 of CTDEEP document, Petroleum Hydrocarbons using the EPH/VPH/APH Analytical Methods and Criteria Development.