

# Connecticut Department of Public Health

## Action Level List for Private Wells

February 2013<sup>1</sup>

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 (CTDPH) 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 (CTDEEP) 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. CTDPH 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 CTDPH (860-509-7740). For questions about analytical methods call CTDPH'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 CTDEEP (860-424-3705).

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

Chemical Contaminant	CT Action Level (µg/L)	Analytical Method <sup>2</sup>
1,1-dichloroethane	25	524.2, 524.3
1,1-dichloroethylene	7	524.2, 524.3
dieldrin	0.03	505, 508, 508.1
1,4-dioxane	3	524.3, 8260B (modified)
endrin	2	505, 508, 508.1
ethylene dibromide (EDB)	0.05 <sup>3</sup>	504, 524.3, 551.1
isopropanol	2300	524.3, 8260B
lead	15	200.5, 200.8, 200.9, SM 3113B
manganese	500	200.7, 200.8, 200.9,
mercury	2	245.1, 245.2, 200.8
methoxychlor	40	505, 508, 508.1
methyl t-butyl ether (MTBE)	70	524.2, 524.3
nitrate nitrogen	10,000	300.0, 353.3
nitrite nitrogen	1000	300.0, 353.3
Perfluorinated alkyl substances (sum of PFOS, PFOA, PFNA, PFHxS, PFHpA) <sup>4</sup>	0.07	537
polychlorinated biphenyls (PCBs)	0.2	505, 508, 508.1
selenium	50	200.5, 200.8, 200.9, SM 3113B
Silvex	50	515 (.1 – .4), 555
tertiary-butyl alcohol (TBA) (total oxygenates) <sup>5</sup>	100	524.2, 524.3
tetrachloroethylene	5	524.2, 524.3
toluene	150	524.2, 524.3
total petroleum hydrocarbon (TPH)	250 <sup>6</sup>	EPH/VPH or ETPH
1,1,1-trichloroethane	200	524.2, 524.3
trichloroethylene	1	524.2, 524.3
1,2,3-trichloropropane	0.05	504, 524.3, 551.1
vinyl chloride	0.5	524.2, 524.3

<sup>1</sup>Perfluorinated substances added to list November 2016.

<sup>2</sup>SM designation indicates APHA/AWWA Standard Methods for the Examination of Water and Wastewater.

<sup>3</sup>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.

<sup>4</sup>PFAS (perfluorinated alkyl substances) abbreviations: PFOS: perfluorooctanesulfonate; PFOA: perfluorooctanoic acid; PFNA: perfluorononanoic acid; PFHxS: perfluorohexanesulfonate; PFHpA: perfluoroheptanoic acid.

<sup>5</sup>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).

<sup>6</sup>Action Level pertains to TPH as detected by the CTDEEP'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](#).