



Fact Sheet: Final Third Drinking Water Contaminant Candidate List (CCL 3)

EPA has published a final list of contaminants which may require regulation under the Safe Drinking Water Act (SDWA).

This final Contaminant Candidate List 3 (CCL 3) includes 104 chemicals or chemical groups and 12 microbiological contaminants which are known or anticipated to occur in public water systems. The list includes chemicals used in commerce, pesticides, waterborne pathogens, disinfection byproducts, and biological toxins. The Agency evaluated approximately 7,500 chemicals and microbes and selected 116 candidates for the CCL 3 that have the potential to present health risks through drinking water exposure.

You can find more information on the CCL on EPA's website at www.epa.gov/safewater/ccl/index.html

Questions and Answers

What is the drinking water CCL?

The drinking water CCL is a list developed by EPA that identifies priority contaminants for regulatory decision making and information collection. The contaminants on the list are known or anticipated to occur in public water systems and may require regulation. However, they are currently unregulated by existing national primary drinking water regulations.

How often is the CCL published?

The Safe Drinking Water Act directs EPA to publish a CCL every five years. We published the first CCL in March 1998. We published the second CCL in February 2005. The draft CCL 3 was published in February 2008.

What contaminants are included on the CCL 3?

The chemicals and microbes are listed on the attached table.

Final Drinking Water Contaminant Candidate List 3

Chemical Contaminants

CASRN	Common Name - Registry Name
630206	1,1,1,2-Tetrachloroethane

75343	1,1-Dichloroethane
96184	1,2,3-Trichloropropane
106990	1,3-Butadiene
99650	1,3-Dinitrobenzene
123911	1,4-Dioxane
57910	17 alpha-Estradiol
71363	1-Butanol
109864	2-Methoxyethanol
107186	2-Propen-1-ol
16655826	3-Hydroxycarbofuran
101779	4,4'-Methylenedianiline
30560191	Acephate
75070	Acetaldehyde
60355	Acetamide
34256821	Acetochlor
187022113	Acetochlor ethanesulfonic acid (ESA)
184992444	Acetochlor oxanilic acid (OA)
107028	Acrolein
142363539	Alachlor ethanesulfonic acid (ESA)
171262172	Alachlor oxanilic acid (OA)
319846	alpha-Hexachlorocyclohexane
62533	Aniline
741582	Bensulide
100447	Benzyl chloride
25013165	Butylated hydroxyanisole

133062	Captan
14866683	Chlorate
74873	Chloromethane (Methyl chloride)
110429624	Clethodim
7440484	Cobalt
80159	Cumene hydroperoxide
NA	Cyanotoxins
141662	Dicrotophos
55290647	Dimethipin
60515	Dimethoate
298044	Disulfoton
330541	Diuron
517099	Equilenin
474862	Equilin
114078	Erythromycin
50282	Estradiol (17-beta estradiol)
50271	Estriol
53167	Estrone
57636	Ethinyl Estradiol (17-alpha Ethynyl Estradiol)
13194484	Ethoprop
107211	Ethylene glycol
75218	Ethylene oxide
96457	Ethylene thiourea
22224926	Fenamiphos
50000	Formaldehyde
7440564	Germanium
74975	Halon 1011

	(bromochloromethane)
75456	HCFC-22
110543	Hexane
302012	Hydrazine
72333	Mestranol
10265926	Methamidophos
67561	Methanol
74839	Methyl bromide (Bromomethane)
1634044	Methyl tert-butyl ether
51218452	Metolachlor
171118095	Metolachlor ethanesulfonic acid (ESA)
152019733	Metolachlor oxanilic acid (OA)
2212671	Molinate
7439987	Molybdenum
98953	Nitrobenzene
55630	Nitroglycerin
872504	N-Methyl-2- pyrrolidone
55185	N-Nitrosodiethylamine (NDEA)
62759	N- nitrosodimethylamine (NDMA)
621647	N-Nitroso-di-n- propylamine (NDPA)
86306	N- Nitrosodiphenylamine
930552	N-nitrosopyrrolidine (NPYR)
68224	Norethindrone (19- Norethisterone)

103651	n-Propylbenzene
95534	o-Toluidine
75569	Oxirane, methyl-
301122	Oxydemeton-methyl
42874033	Oxyfluorfen
14797730	Perchlorate
1763231	Perfluorooctane sulfonic acid (PFOS)
335671	Perfluorooctanoic acid (PFOA)
52645531	Permethrin
41198087	Profenofos
91225	Quinoline
121824	RDX
135988	sec-Butylbenzene
7440246	Strontium
107534963	Tebuconazole
112410238	Tebufenozide
13494809	Tellurium
13071799	Terbufos
56070167	Terbufos sulfone
59669260	Thiodicarb
23564058	Thiophanate-methyl
26471625	Toluene diisocyanate
78488	Tribufos
121448	Triethylamine
76879	Triphenyltin hydroxide (TPTH)
51796	Urethane
7440622	Vanadium
50471448	Vinclozolin

137304	Ziram
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Microbial Contaminants

Adenovirus
Caliciviruses
<i>Campylobacter jejuni</i>
Enterovirus
<i>Escherichia coli</i> (0157)
<i>Helicobacter pylori</i>
Hepatitis A virus
<i>Legionella pneumophila</i>
<i>Mycobacterium avium</i>
<i>Naegleria fowleri</i>
<i>Salmonella enterica</i>
<i>Shigella sonnei</i>

What approach did EPA use to list contaminants on the CCL?

In developing the CCL 3, the Agency implemented a different process from that used for CCL 1 and CCL 2. This new process builds on evaluations from previous CCLs and was based on substantial expert input and recommendations from various groups, including the National Academy of Science’s National Research Council (NRC), the National Drinking Water Advisory Council (NDWAC), and the Science Advisory Board (SAB).

The Agency considered the best available health effects and occurrence data and information to evaluate unregulated contaminants. EPA evaluated data for chemicals identified in Superfund, registered pesticides, chemicals detected in drinking water or source waters, chemicals released to the environment, or high production commercial chemicals. The Agency also evaluated human pathogens for their potential to cause waterborne disease through drinking water exposure.

EPA used a multi-step CCL process to identify contaminants for inclusion on the CCL 3. The key steps EPA took to develop the CCL 3 include:

- 1) Identifying a broad universe of potential drinking water contaminants (called the “CCL Universe”). EPA evaluated 284 data sources that may identify potential chemical and microbial contaminants and selected a set of approximately 7,500 contaminants from these data sources for initial consideration.
- 2) Applying screening criteria to the CCL universe to identify those contaminants that should be further evaluated (the preliminary CCL or PCCL) based on a contaminant’s potential to occur in public water systems and the potential for public health concern.

- 3) Identifying contaminants from the PCCL to include on the CCL based on more detailed evaluation of occurrence and health effects and expert judgment applied in a transparent, reproducible manner.
- 4) Incorporating public input and expert review in the CCL process.

EPA sought public input by asking for nominations of contaminants to consider for the CCL in October 2006 and incorporated these nominations into the three key steps discussed above. EPA also convened several expert panels to obtain review and input on the processes used to identify the draft CCL and the CCL 3 itself.

How did EPA consider public comments on the draft CCL 3?

EPA published the draft CCL 3 FR notice in February 2008. In this FR notice, EPA solicited input from the public, and specifically requested comments on (1) the approach EPA used to create the list; (2) contaminants on the list; and (3) specific contaminants such as pharmaceuticals, perfluorinated compounds, and microbes. EPA reviewed all comments received on the draft CCL 3 and evaluated information provided by commenters in determining which contaminants to include on the final CCL 3.

What changes were made from the draft CCL 3 to the final CCL 3?

Based on the Agency's review of data and information collected during the comment period and new available data, the Agency made these changes from the draft to the final CCL 3:

- Removed 2 pesticides (ethion and nitrofen) because the registrations were cancelled and available data indicates they are unlikely to appear in drinking water sources.
- Added 10 pharmaceuticals; one antibiotic (erythromycin) and nine hormones (17 alpha-estradiol, 17-beta estradiol, equilenin, equilin, estriol, estrone, ethinyl estradiol, mestranol, and norethindrone) based on new health effects and occurrence data in ambient water.
- Added 2 disinfection by-products (bromochloromethane (Halon1011) and chlorate) based on new health effects and occurrence data.
- Added perfluorooctane sulfonate (PFOS) based on new health effects and occurrence data in public water systems.
- Removed 2 microbes (*Vibrio cholerae* and *Entamoeba histolytica*) because the Agency decided to only use waterborne disease outbreak data more recent than January 1991.
- Added 3 microbes to the final CCL 3 (*Mycobacterium avium*, Enterovirus and Adenovirus). *Mycobacterium avium* was added to the list based on the Agency's re-evaluation of its health effects. Enterovirus and Adenovirus were added to the list based on changes to the selection criteria and because the Agency used waterborne disease outbreak data more recent than January 1991.

What happens to contaminants on the draft CCL 3?

The purpose of the draft CCL 3 was to present the list of contaminants and seek comment on the list and various aspects of its development. The Agency sought comments on the process used to identify the draft CCL 3, the data used in the process, and on the individual contaminants included in the CCL 3. All comments submitted were considered in determining the final CCL3.

What happens to contaminants on the final CCL 3?

EPA will evaluate all the contaminants on the CCL 3 to determine which contaminants have sufficient information to allow the Agency to make a regulatory determination. For those contaminants that lack sufficient information, EPA will encourage research to provide the information needed to determine whether to regulate the contaminant.

Does the CCL impose any requirements on public water systems?

No. Publishing the CCL does not impose any requirements on public water systems. If EPA decided to regulate a contaminant on the list in the future, the Agency would start a separate rulemaking process with opportunity for public comment.

What is a regulatory determination?

A regulatory determination is a formal decision on whether EPA should initiate a process to develop a national primary drinking water regulation for a specific contaminant. The law requires that EPA make regulatory determinations for at least five contaminants from the most recent CCL every five years.

Where can I find more information about this notice and the CCL?

For information on the third CCL 3, please visit the EPA internet website, www.epa.gov/safewater/ccl/ccl3.html. For general information on drinking water, please visit the EPA Safewater website at www.epa.gov/safewater or contact the Safe Drinking Water Hotline at 1-800-426-4791. Local or international calls can reach the Hotline at 703-412-3330. The Safe Drinking Water Hotline is open Monday through Friday, excluding legal holidays, from 10:00 a.m. to 4:00 p.m., Eastern time.