**HEALTH EFFECTS LANGUAGE FOR CCR**

**In accordance with** [**40 CFR 141.153(d)(6)**](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-141/subpart-O#p-141.153(d)(6))**, to describe the potential health effects, the system must use the relevant language below.**

**Microbiological Contaminants:**

1. Total Coliform Bacteria: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
2. Fecal coliform/*E. coli*: Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
3. Fecal Indicators (enterococci or coliphage): Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
4. Turbidity: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for bacterial growth. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
5. Total organic carbon: Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
6. Cryptosporidium: Cryptosporidium is a protozoan parasite, which may cause nausea, vomiting, gastroenteritis, diarrhea and associated abdominal cramping. Cryptosporidium contamination of a water supply is a significantly more serious problem among persons with HIV/AIDS or other immunosuppressive conditions, who may suffer chronic and debilitating diseases as a result of infection.
7. Giardia lamblia: Giardia lamblia is a protozoan parasite, which may cause chronic diarrhea with associated bloating, fatigue, anorexia, cramps and weight loss.

**Radioactive Contaminants:**

1. Beta/photon emitters: Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
2. Alpha emitters: Certain minerals are radioactive and emit a form of radiation known as Alpha radiation. Some people who drink water containing these alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
3. Combined Radium 226/228: Some people who drink water containing radium 226/228 in excess of the MCL over many years may have an increased risk of getting cancer.
4. Uranium: Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
5. Radon: Some people who drink water-containing radon in excess of the MCL over many years may have an increased risk of getting cancer.

**Inorganic Contaminants:**

1. Antimony: Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
2. Arsenic: Some people who drink water containing arsenic well in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.
3. Asbestos: Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
4. Barium: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
5. Beryllium: Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions
6. Bromate: Some people who drink water of containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
7. Cadmium: Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
8. Chloramines: Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
9. Chlorine: Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
10. Chlorine dioxide: Some infants and young children who drink water chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
11. Chlorite: Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
12. Chromium: Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
13. Copper: Copper is an essential nutrient, but some people who drink water containing Copper in excess of the action level over a relatively short time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their doctor.
14. Cyanide: Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
15. Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
16. Lead: Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.
17. Mercury (inorganic): Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate: Infants below the age of six months who drink water containing Nitrate in excess of the MCL could become seriously ill and, if untreated, die. Symptoms include shortness of breath and blue baby syndrome.
19. Nitrite: Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, die. Symptoms include shortness of breath and blue baby syndrome.
20. Selenium: Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
21. Thallium: Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

**Synthetic Organic Contaminants Including Pesticides and Herbicides:**

1. 2,4-D: Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands
2. 2,4,5-TP [Silvex]: Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
3. Acrylamide: Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood and may have an increased risk of getting cancer.
4. Alachlor: Some people who drink water-containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
5. Atrazine: Some people who drink water-containing atrazine in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
6. Benzo(a)pyrene: Some people who drink water-containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
7. Carbofuran: Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
8. Chlordane: Some people who drink water-containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system and may have an increased risk of getting cancer.
9. Dalapon: Some people who drink water-containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
10. Di(2-ethylhexyl)adipate: Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.
11. Di(2-ethylhexyl)phthalate: Some people who drink water containing Di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
12. Dibromo-3-chloropronane (DBCP): Some people who drink water containing DBCP in excess of the MCL over many years could experience some kidney damage and may have an increased risk of getting cancer.
13. Dinoseb: Some people who drink water containing Dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
14. Dioxin (2,3,7,8-TCDD): Some people who drink water containing dioxin in excess of the MCL over many years could experience problems reproductive difficulties and may have an increased risk of getting cancer.
15. Diquat: Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
16. Endothall: Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
17. Endrin: Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
18. Epichlorohydrin: Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems and may have an increased risk of getting cancer.
19. Ethylene Dibromide: Some people who drink water containing Ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
20. Glyphosate: Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
21. Heptachlor: Some people who drink water containing Heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
22. Heptachlor Epoxide: Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
23. Hexachlorobenzene: Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
24. Hexachlorocyclopentadiene: Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
25. Lindane: Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
26. Methoxychlor: Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
27. Methyl-Tertiary-Butyl-Ether (MTBE): Based on limited sampling data currently available, most concentrations at which MTBE has been found in drinking water sources are unlikely to cause adverse health effects. MTBE is currently under EPA review.
28. Oxamyl [Vydatel]: Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
29. PCBs [Polychlorinated biphenyls]: Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
30. Pentachlorophenol: Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
31. Picloram: Some people who drink water containing picloram well in excess of the MCL over many years could experience problems with their liver.
32. Polychlorinated Biphenyls (PCBs): Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
33. Silvex (2,4,5-TP): Some people who drink water containing silvex well in excess of the MCL over many years could experience liver problems.
34. Simazine: Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
35. Toxaphene: Some people who drink water containing toxaphene in excess of the MCL over many years could suffer from kidney, liver, or thyroid, and may have an increased risk of getting cancer.

**Volatile Organic Contaminants:**

1. Benzene: Some people who drink water-containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets and may have an increased risk of getting cancer.
2. Carbon Tetrachloride: Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
3. Chlorobenzene: Some people who drink water-containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
4. o-Dichlorobenzene: Some people who drink water containing o-Dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory system.
5. p-Dichlorobenzene: Some people who drink water containing p-Dichlorobenzene well in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
6. 1,2-Dichloroethane: Some people who drink water containing l,2-Dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
7. 1,1-Dichloroethylene: Some people who drink water containing l,l-Dichloroethylene in excess of the MCL over many years could experience problems with their liver.
8. cis-1,2-Dichloroethylene: Some people who drink water containing cis-1,2-Dichloroethylene in excess of the MCL over many years could experience problems with their liver.
9. trans-1,2-Dichloroethylene: Some people who drink water containing trans-1,2-Dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
10. Dichloromethane (Methylene Chloride): Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
11. 1,2-Dichloropropane: Some people who drink water containing l,2-Dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
12. Ethylbenzene: Some people who drink water containing ethylbenzene in excess of the MCL over many years could experience damage to the liver, kidneys, central nervous system and/or eyes.
13. Haloacetic Acids: Some people who drink water containing haloacetic acids in excess of the MCL over many years could experience nervous system or liver damage.
14. Styrene: Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
15. Tetrachloroethylene: Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver and may have an increased risk of getting cancer.
16. 1,2,4-Trichlorobenzene: Some people who drink water containing 1,2,4-Trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
17. 1,1,1-Trichloroethane: Some people who drink water containing l,l,l-Trichloroethane well in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
18. l,l,2-Trichloroethane: Some people who drink water containing 1,l,2-Trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune system.
19. Trichloroethylene: Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
20. Total Trihalomethanes (TTHMs): Some people who drink water containing TTHMs in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
21. Toluene: Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
22. Vinyl Chloride: Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
23. Xylenes: Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

**Recommended Language:**

1. Per- and Polyfluoroalkyl Substances (PFAS): Per- and polyfluoroalkyl substances (PFAS) levels in excess of the Connecticut Department of Public Health’s (DPH) Action Levels of 16 ng/L for perfluorooctanoic acid (PFOA), 10 ng/L for perfluorooctane sulfonic acid (PFOS), 12 ng/L for perfluorononanoic acid (PFNA), and 49 ng/L for perfluorohexane sulfonic acid (PFHxS) may increase your risk of developing a variety of health effects. These include effects on pregnancy outcomes and growth and development (fetus, infant and children), on the immune and endocrine systems, and the thyroid, liver, and kidneys (everyone). Some studies have also shown an increased risk for kidney cancer, and, at very high exposure levels for testicular cancer. Because of these cancer and non-cancer risks, you should consider drinking alternative water sources until treatment is in place to reduce the level of PFAS. Due to the concern about developmental and pregnancy-related effects, it is especially important that this water not be used to prepare baby formula, and that pregnant women and children consider drinking alternative water sources. Water with PFAS levels above the drinking water Action Level can be used for bathing, showering, and washing dishes and clothes.
2. Legionella: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

November 3, 2022