



Stakeholder Guide

Delaware Department of Natural Resources and Environmental Control (DNREC) staff propose suggested changes to the current Human Health and Aquatic Life Water Quality Criteria for the 2021 Triennial Review of Water Quality Standards. This guide is intended to briefly discuss the proposed changes.

EPA extensively revised their National Recommended Water Quality Criteria for human health recommendations in 2015 based on the latest science and information. The Department’s proposed changes would incorporate most of EPA’s recommendations.

Because of the extensive changes to EPA recommendations for human health criteria in the current regulations, staff have proposed the current table be stricken in its entirety. A simpler new table of 116 pollutants based on EPA latest guidance is offered in its place.

The new table closely parallels EPA guidance online at www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table.

There are five pollutants that EPA and DNREC staff believe deserve more study before Delaware adopts them, based on a preliminary analysis of factors used in the criteria calculations and data the Department has collected. They are Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, and Dibenz(a,h)anthracene. For those pollutants the current criteria would remain in place. Note that Delaware does not currently have applicable human health criteria for Benzo(j)+(k)fluoranthene and the Department is not proposing adoption for new criteria at this time.

In accordance with EPA’s updated guidance criteria will be lower for 64 pollutants, higher for 13 pollutants and unchanged for 20 pollutants. Ten new pollutants -- Bis(Chloromethyl) Ether, Dinitrophenols, Nitrosodibutylamine, Nitrosodiethylamine, Nitrosopyrrolidine, Pentachlorobenzene, 1,2,4,5-Tetrachlorobenzene, 2,4,5-Trichlorophenol, 2-Methyl-4,6-Dinitrophenol, and 3-Methyl-4-Chlorophenol -- have been added to the list.

To make the criteria more closely aligned with EPA guidance the proposed regulation drops some criteria and substitutes new related criteria in their place according to the table below.

Current Delaware Criteria	Substitutions
Endosulfan	Alpha-Endosulfan Beta-Endosulfan Endosulfan Sulfate
DDT and Metabolites (DDD and DDE)	p,p’-Dichlorodiphenyldichloroethane (DDD) p,p’-Dichlorodiphenyldichloroethylene (DDE) p,p’-Dichlorodiphenyltrichloroethane (DDT)
Chromium	Chromium (III) Chromium (VI)
Nickel (soluble salts)	Nickel



Delaware’s current criteria have eight criteria with pollutant names that are synonyms for the same pollutant in EPA’s guidance. This updated regulation changes the names to be consistent with EPA guidance. This table shows the current criteria and the pollutant as shown in EPA Guidance.

Current Delaware Criteria	EPA Guidance
alpha-BHC	alpha-Hexachlorocyclohexane (HCH)
beta-BHC	beta-Hexachlorocyclohexane (HCH)
Bis(2-Chloroisopropyl)Ether	Bis(2-Chloro-1-methylethyl) Ether
gamma-BHC (Lindane)	gamma-Hexachlorocyclohexane (HCH) [Lindane]
Hexachlorocyclohexane	Hexachlorocyclohexane (HCH) -Technical
Dichloromethane	Methylene Chloride
2,4 Dichlorophenoxyacetic acid (2,4-D)	Chlorophenoxy Herbicide (2,4-D)
2,4,5 Trichlorophenoxypropionic acid (2,4,5-TP- Silvex)	Chlorophenoxy Herbicide (2,4,5-TP) [Silvex]

Because there is no EPA guidance for human health criteria for Fluoride, Lead, Silver or Total Trihalomethanes, this regulation removes them from Delaware’s Human Health Criteria. There are applicable Aquatic Life Criteria for Lead and Silver that are more stringent than the current human health criteria and they would remain in place.

For Aquatic Life Criteria, EPA has updated its recommendations for Aluminum, Ammonia, Cadmium, Nonlyphenol and Selenium. This regulation adopts these recommendations with the exception of Aluminum and Selenium as EPA has not completed their implementation guidance for these two pollutants to date.

In the past, the Department used Fish Consumption advisories in assessments of the Aquatic Life Use. Some other states and jurisdictions have a Fish Consumption designated use. The EPA ATTAINS database is structured to separate fish consumption uses from the aquatic life use. Department and EPA staff believe that adding the Fish Consumption designated use will bring better clarity to assessments and management actions and better fit the ATTAINS database than the past practice. Thus, the updated regulation adds the Fish Consumption designated use for all waters of the State. The Department envisions the Fish Consumption use assessments to be driven by Fish Tissue advisories that are based on measurements of levels and combinations of toxic chemicals in fish tissue.