DEPARTMENT OF ENERGY AND ENVIRONMENT
NOTICE OF SECOND PROPOSED RULEMAKING

Water Quality Standards for 2016 Triennial Review

The Director of the Department of Energy and Environment (DOEE), in accordance with the authority set forth in the District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § 8-151.01 *et seq*. (2013 Repl. and 2018 Supp.)), sections 5 and 21 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Law 5-188; D.C. Official Code §§ 8-103.04 and 8-103.20 (2013 Repl.)), and Mayor's Order 98-50, dated April 15, 1998, as amended by Mayor's Order 2006-61, dated June 14, 2006, hereby gives notice of the proposed rulemaking action to amend Chapter 11 (Water Quality Standards) of Title 21 (Water and Sanitation) of the District of Columbia Municipal Regulations (DCMR) in not less than 30 days from the date of publication of this notice in the *D.C. Register*.

DOEE is conducting the triennial review of the District of Columbia's Water Quality Standards (WQS) regulations as required by section 5(a) of the Water Pollution Control Act (D.C. Official Code § 8-103.04(a)), and section 303(c) of the federal Clean Water Act (33 U.S.C. § 1313(c)). The purpose of the WQS Triennial Review is to update the District's WQS based on Environmental Protection Agency (EPA) recommendations, which are created using new data, analysis, and studies to enhance water quality and protect designated uses.

On September 15, 2017 DOEE published for public comment, the first proposed rulemaking in the *D.C. Register* to revise the WQS. This rulemaking proposed to update the recreational criteria for *E.coli*, aquatic life criteria for ammonia and cadmium, and 94 human health criteria. DOEE held a public hearing on the first proposed rulemaking on October 26, 2017. Written comments on the proposed rulemaking were received from the EPA, environmental groups, and DC Water. Based on the comments received, DOEE made one substantial change. The change removed the update to the recreational criteria for *E. coli*. DOEE needs more time to analyze the available data and understand the impacts of adopting the new criteria. At the same time, implementation of DC Water's Long-Term Control Plan (LTCP) for combined sewer overflows is well underway. This plan was based, in part, on compliance with the current *E. coli* criteria. The current recreational criteria for *E. coli* in the WQS will remain.

This second proposed rulemaking updates aquatic life criteria for ammonia and cadmium, and 94 human health criteria. Prior to promulgating this second proposed rulemaking, DOEE undertook a study to consider the socio-economic, institutional, technological, and environmental impacts (SITE) of applying and enforcing the updates to the WQS. DOEE anticipates that there will not be substantial negative impacts from adopting the ammonia, cadmium, and 94 human health criteria. In fact, substantial benefits are anticipated from adopting these criteria into the WQS to improve the water quality of District waters.

The proposed updates to the aquatic life criteria for ammonia are based on EPA's latest scientific studies and new toxicity data on freshwater mussels and gill-breathing snails. This information is documented in the 2013 Aquatic Life Ambient Water Quality Criteria for Ammonia –

Freshwater (EPA 822-R-13-001). Ammonia can be toxic to fish and other invertebrates in waterbodies. The updated chronic criterion will become less stringent, while the acute criterion will be more stringent.

The proposed update to the aquatic life criteria for cadmium is also based on EPA recommendations, the 2016 Aquatic Life Ambient Water Quality Criteria – Cadmium (EPA 820-R-16-002). Chronic cadmium exposure can lead to adverse effects in the growth, reproductive, immune, and endocrine systems of aquatic life. Cadmium is, however, a naturally occurring metal found in mineral deposits and distributed ubiquitously at low concentrations in the environment. The updated chronic criterion is less stringent than the current chronic criterion, while the acute is more stringent.

The updates to the human health criteria are based on EPA's 2015 recommendations that revise the human health criteria for 94 chemicals. Examples of these chemicals include DDT and its breakdown products, benzene, and heptachlor epoxide. The recommendations reflect the latest scientific information on factors like body weight, drinking water intake, fish consumption rates, bioaccumulation factors, and toxicity values. Most of the updated criteria are becoming more stringent.

Title 21 of the District of Columbia Municipal Regulations, Chapter 11 (Water Quality Standards), Section 1104.8 is amended as follows:

Strike the current Section 1104.8 in its entirety, and insert the following in its place, to read as follows:

1104.8 Unless otherwise stated, the numeric criteria that shall be met to attain and maintain designated uses are as follows in Tables 1 through 3:

Table 1: Conventional Constituents Numeric Criteria

Constituent	Class A	Class B	Class C
Chlorophyll *a*[a,b] (μg/L)(seasonal segment average)			
July 1 through September 30	—	—	25
Dissolved Oxygen (mg/L)			
Instantaneous minimum (year-round)[c]	—	—	5.0
February 1 through May 31[a,b]			
7-day mean	—	—	6.0
Instantaneous minimum	—	—	5.0
June 1 through January 31[a,b]			
30-day mean	—	—	5.5
7-day mean	—	—	4.0
Instantaneous minimum[d]	—	—	3.2
E. coli[e] (MPN/100 mL)			

Constituent	Class A	Class B	Class C
Geometric mean (Geometric mean of 5 samples over a maximum period of 30 days)	126	—	—
Single Sample Value	410	—	—
Hydrogen Sulfide (maximum μg/L)	—	—	2.0
Oil and Grease (mg/L)	—	—	10.0
pH			
Greater than	6.0	6.0	6.0
And less than	8.5	8.5	8.5
Secchi Depth[a,b] (m)(seasonal segment average)			
April 1 through October 31	—	—	0.8
Temperature (°C)			
Maximum	—	—	32.2
Maximum change above ambient	—	—	2.8
Total Dissolved Gases (maximum % saturation)	—	—	110
Turbidity Increase above Ambient (NTU)	20	20	20

Footnotes:

[a] Attainment of the dissolved oxygen, water clarity and chlorophyll *a* water quality criteria that apply to tidal influenced Class C waters will be determined following the guidelines documented in the 2003 United States Environmental Protection Agency publication: Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll *a* for the Chesapeake Bay and its Tidal Tributaries, EPA 903-R-03-002 (April 2003, Region III Chesapeake Bay Program Office, Annapolis, Maryland); 2004 Addendum, EPA 903-R-04-005 (October 2004); 2007 Addendum, EPA 903-R-07-003 CBP/TRS 285/07 (July 2007); 2007 Chlorophyll Criterion Addendum, EPA 903-R-07-005 CBP/TRS 288-07 (November 2007); 2008 Addendum, EPA 903-R-08-001 CBP/TRS 290-08 (September 2008); and 2010 Criterion Addendum, EPA 903-R-10-002 CBP/TRS-301-10 (May 2010).

[b] Shall apply to only tidally influenced waters.

[c] Shall apply to only nontidal waters.

[d] At temperatures greater than 29°C in tidally influenced waters, an instantaneous minimum dissolved oxygen concentration of 4.3 mg/L shall apply.

[e] The geometric mean criterion shall be used for assessing water quality trends and for permitting. The single sample value criterion shall be used for assessing only water quality trends.

Table 2: Trace Metals and Inorganics Numeric Criteria

Constituent[a] Trace metals and inorganics in μg/L, except where stated otherwise (see Notes below)	**Class C**		**Class D**[b]
	CCC 4-Day Avg	**CMC 1-Hour Avg**	**30-Day Avg**
Ammonia, mg total ammonia nitrogen (TAN)/L	See Footnote g	See Footnote h	—
Antimony, total recoverable	—	—	640
Arsenic, dissolved	150	340	0.14[c]
Cadmium, dissolved	See Footnotes d and e	See Footnotes d and e	—
Chlorine, total residual	11	19	—
Chromium, hexavalent, dissolved	11[e]	16[e]	—
Chromium, trivalent, dissolved	See Footnotes d and e	See Footnotes d and e	—
Copper, dissolved	See Footnotes d and e	See Footnotes d and e	—
Cyanide, free	5.2	22	400
Iron, dissolved	1,000	—	—
Lead, dissolved	See Footnotes d and e	See Footnotes d and e	—
Mercury, dissolved	0.77[e]	1.4[e]	0.15
Methylmercury (mg/kg, fish tissue residue)	—	—	0.3
Nickel, dissolved	See Footnotes d and e	See Footnotes d and e	4,600
Selenium, total recoverable	5	20	4,200
Silver, dissolved	—	See Footnotes d and e	65,000
Thallium, dissolved	—	—	0.47
Zinc, dissolved	See Footnotes d and e	See Footnotes d and e	26,000

Footnotes:

[a] For constituents without numerical criteria, standards have not been developed at this time. However, the National Pollution Discharge Elimination System (NPDES) permitting authority shall address constituents without numerical standards in NPDES permit actions by using the narrative criteria for toxics contained in these water quality standards.

[b] The Class D human health criteria for metals will be based on total recoverable metals.

[c] The criteria is based on carcinogenicity of 10^{-6} risk level.

[d] The formulas for calculating the criterion for the hardness dependent constituents indicated above are as follows:

Table 2a: Formulas for Hardness-Dependent Constituents[f]

Constituent	CCC	CMC
Cadmium	$e^{(0.7977[\ln(\text{hardness})] - 3.909)}$	$e^{(0.9789[\ln(\text{hardness})] - 3.866)}$
Chromium III	$e^{(0.8190[\ln(\text{hardness})] + 0.6848)}$	$e^{(0.8190[\ln(\text{hardness})] + 3.7256)}$
Copper	$e^{(0.8545[\ln(\text{hardness})] - 1.702)}$	$e^{(0.9422[\ln(\text{hardness})] - 1.700)}$
Lead	$e^{(1.2730[\ln(\text{hardness})] - 4.705)}$	$e^{(1.2730[\ln(\text{hardness})] - 1.460)}$
Nickel	$e^{(0.8460[\ln(\text{hardness})] + 0.0584)}$	$e^{(0.8460[\ln(\text{hardness})] + 2.255)}$
Silver	—	$e^{(1.7200[\ln(\text{hardness})] - 6.590)}$
Zinc	$e^{(0.8473[\ln(\text{hardness})] + 0.884)}$	$e^{(0.8473[\ln(\text{hardness})] + 0.884)}$

[e] The criterion is multiplied by the EPA conversion factor in Table 2b as specified in subsection 1105.10:

Table 2b: Conversion Factors for Dissolved Metals[f]

Constituent	CCC	CMC
Cadmium	1.101672 − [(ln hardness)(0.041838)]	1.136672 − [(ln hardness)(0.041838)]
Chromium III	0.860	0.316
Chromium VI	0.962	0.982
Copper	0.960	0.960
Lead	1.46203 − [(ln hardness)(0.145712)]	1.46203 − [(ln hardness)(0.145712)]
Mercury	0.85	0.85
Nickel	0.997	0.998
Silver	—	0.85
Zinc	0.986	0.978

[f] Hardness in Tables 2a and 2b shall be measured as mg/L of calcium carbonate ($CaCO_3$). The minimum hardness value allowed for use in these formulas shall not be less than 25 mg/L as $CaCO_3$, even if the actual ambient hardness is less than 25 mg/L as $CaCO_3$. The maximum hardness value allowed for use in these formulas shall not exceed 400 mg/L as $CaCO_3$, even if the actual ambient water hardness is greater than 400 mg/L as $CaCO_3$.

[g] Criterion Continuous Concentration (CCC) for total ammonia nitrogen (in mg TAN/L):

(a) The CCC for total ammonia nitrogen (in mg TAN/L) (i) shall be the thirty (30) day average concentration for total ammonia nitrogen computed for a design flow specified in subsection 1105.5; and (ii) shall account for the influence of the pH and temperature as shown in Table 2c. The highest four (4) day average within the thirty (30) day period shall not exceed 2.5 times the CCC.

(b) The CCC in Table 2c was calculated using the following formula, which shall be used to

calculate unlisted values:

$$\mathrm{CCC} = 0.8876 \times \left(\frac{0.0278}{1 + 10^{7.688-pH}} + \frac{1.1994}{1 + 10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028 \times (20-MAX(T,7))}\right)$$

Table 2c: Temperature and pH-Dependent Total Ammonia Nitrogen (in milligrams of total ammonia nitrogen per liter (mg TAN/L) of the CCC.

Temperature (°C)																								
pH	**0-7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	4.9	4.6	4.3	4.1	3.8	3.6	3.3	3.1	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.5	1.4	1.3	1.2	1.1
6.6	4.8	4.5	4.3	4.0	3.8	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1
6.7	4.8	4.5	4.2	3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1
6.8	4.6	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1
6.9	4.5	4.2	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0
7.0	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.3	2.2	2.0	**1.9**	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.99
7.1	4.2	3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95
7.2	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.96	0.90
7.3	3.8	3.5	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.97	0.91	0.85
7.4	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.96	0.90	0.85	0.79
7.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.83	0.78	0.73
7.6	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.1	1.1	0.98	0.92	0.86	0.81	0.76	0.71	0.67
7.7	2.6	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60
7.8	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53
7.9	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47
8.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60	0.56	0.53	0.50	0.44	0.44	0.41
8.1	1.5	1.5	1.4	1.3	1.2	1.1	1.1	0.99	0.92	0.87	0.81	0.76	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35
8.2	1.3	1.2	1.2	1.1	1.0	0.96	0.90	0.84	0.79	0.74	0.70	0.65	0.61	0.57	0.54	0.50	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30
8.3	1.1	1.1	0.99	0.93	0.87	0.82	0.76	0.72	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26
8.4	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.30	0.28	0.26	0.25	0.23	0.22
8.5	0.80	0.75	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45	0.42	0.40	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.24	0.22	0.21	0.20	0.18
8.6	0.68	0.64	0.60	0.56	0.53	0.49	0.46	0.43	0.41	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.16	0.15
8.7	0.57	0.54	0.51	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13
8.8	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26	0.24	0.23	0.21	0.20	0.19	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11
8.9	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.12	0.11	0.10	0.09
9.0	0.36	0.34	0.32	0.30	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08

[h] Criterion Maximum Concentration (CMC) for total ammonia nitrogen (in mg TAN/L):

(a) The CMC criterion for total ammonia nitrogen (in mg TAN/L) (i) shall be the one (1)-hour average concentration for total ammonia nitrogen, computed for a design flow specified in Subsection 1105.5; and (ii) shall account for the influence of the pH and temperature as shown in Table 2d.

(b) The CMC was calculated using the following formula, which shall be used to calculate unlisted values:

$$CMC = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right),\right.$$
$$\left.\left(0.7249\times\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\times\left(23.12\times 10^{0.036\times(20-T)}\right)\right)\right)$$

Table 2d: Temperature and pH-Dependent Total Ammonia Nitrogen (in milligrams of total ammonia nitrogen per liter (mg TAN/L) of the CMC for *Oncorhynchus* spp. Present.

Temperature (°C)																	
pH	**0-14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	33	33	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	31	31	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	30	30	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0
6.8	28	28	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	26	26	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7.0	24	24	23	21	20	18	**17**	15	14	13	12	11	10	9.4	8.6	8.0	7.3
7.1	22	22	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	20	20	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6.0
7.3	18	18	17	16	14	13	12	11	10	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.3
7.4	15	15	15	14	13	12	11	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.5	13	13	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
7.6	11	11	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	9.6	9.6	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	3.0
7.8	8.1	8.1	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
7.9	6.8	6.8	6.6	6.0	5.6	5.1	4.7	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8.0	5.6	5.6	5.4	5.0	4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
8.1	4.6	4.6	4.5	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
8.2	3.8	3.8	3.7	3.5	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	3.1	3.1	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
8.4	2.6	2.6	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
8.5	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
8.6	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.59	0.54
8.7	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.2	1.2	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1.0	1.0	1.0	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
9.0	0.88	0.88	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Table 3: Organic Constituents Numeric Criteria

Organic Constituent[a] (*µg*/L)	CAS Number	Class C		Class D
		CCC 4-Day Avg	CMC 1-Hour Avg	30-Day Avg
Acrolein	107028	3.0	3.0	400
Acrylonitrile	107131	700.0	—	7.0, [b]
Aldrin	309002	0.4	3.0	0.00000077, [b]
Benzene	71432	1000	—	16, [b]
Carbamates	—	—	—	—
Carbaryl (Sevin)	63252	2.1	2.1	—
Carbon Tetrachloride	56235	1000	—	5, [b]
Chlordane	57749	0.0043	2.4	0.00032, [b]
Chlorinated Benzenes (except Di)	—	25.0	—	—
Chlorobenzene	108907	—	—	800
1,2-Dichlorobenzene	95501	200	—	3,000
1,3-Dichlorobenzene	541731	200	—	10
1,4-Dichlorobenzene	106467	200	—	900
Hexachlorobenzene	118741	—	—	0.000079, [b]
Pentachlorobenzene	608935	—	—	0.1
1,2,4,5-Tertrachlorobenzene	95943	—	—	0.03
1,2,4-Trichlorobenzene	120821	—	—	0.076
Chlorinated Ethanes	—	50	—	—
1,2-Dichloroethane	107062	—	—	650, [b]
Hexachloroethane	67721	—	—	0.1, [b]
1,1,2,2-Tetrachloroethane	79345	—	—	3, [b]
1,1,1-Trichloroethane	71556			200,000
1,1,2-Trichloroethane	79005	—	—	8.9, [b]
Chlorinated Naphthalenes	—	—	—	—
2-Chloronaphthalene	91587	200	—	1000
Chlorinated Phenols	—	—	—	—
2-Chlorophenol	95578	100	—	800
2,4-Dichlorophenol	120832	200	—	60
Pentachlorophenol[c]	87865	[I][c]	[I.A][c]	0.04, [b]
2,4,5-Trichlorophenol	95954	—	—	600
2,4,6-Trichlorophenol	88062	—	—	2.8, [b]
3-Methyl-4-Chlorophenol	59507			2,000
Chloroalkyl Ethers	—	1000	—	—
Bis(2-Chloroethyl) Ether	111444	—	—	2.2, [b]
Bis(2-Chloro-1-methylethyl) Ether	108601	—	—	4,000
Bis(Chloromethyl) Ether	542881	—	—	0.017, [b]

Table 3: Organic Constituents Numeric Criteria

Organic Constituent[a] (*µg*/L)	CAS Number	Class C		Class D
		CCC 4-Day Avg	CMC 1-Hour Avg	30-Day Avg
Chlorophenoxy Herbicide (2,4-D)	94757			12,000
Chlorophenoxy Herbicide (2,4,5-TP) [Silvex]	93721			400
3,3-Dichlorobenzidine	91941	10	—	0.15, [b]
Dichloroethylenes	—	1000	—	—
1,1-Dichloroethylene	75354	—	—	20,000
Trans-1,2-Dichloroethylene	156605	-	—	4,000
1,2-Dichloropropane	78875	2000	—	31, [b]
Dichloropropenes	—	400	—	—
1,3-Dichloropropene	542756			12, [b]
Dieldrin	60571	0.056	0.24	0.0000012, [b]
2,4-Dimethylphenol	105679	200		3000
2,4-Dinitrotoluene	121142	33		1.7, [b]
Dioxin (2,3,7,8-TCDD)	1746016			0.0000000051, [b]
1,2-Diphenylhydrazine	122667	30		0.2, [b]
Endosulfan	—	0.056	0.22	89
alpha-Endosulfan	959988	0.056	0.22	30
beta-Endosulfan	33213659	0.056	0.22	40
Endosulfan Sulfate	1031078	—	—	40
Endrin	72208	0.036	0.086	0.03
Endrin Aldehyde	7421934	—	—	1
Ethylbenzene	100414	40	—	130
Halomethanes	—	1000	—	—
Bromoform	75252	—	—	120, [b]
Chloroform	67663	3000	—	2000
Chlorodibromomethane	124481	—	—	21, [b]
Dichlorobromomethane	75274	—	—	27, [b]
Methyl Bromide	74839	—	—	10,000
Methylene Chloride	75092	—	—	1,000, [b]
Heptachlor	76448	0.0038	0.52	0.0000059, [b]
Heptachlor Epoxide	1024573	0.0038	0.52	0.000032, [b]
Hexachlorobutadiene	87683	10	—	0.01, [b]
Hexachlorocyclohexane (HCH)-Technical	608731	—	—	0.010, [b]
alpha-Hexachlorocyclohexane (HCH)	319846	—	—	0.00039, [b]
beta-Hexachlorocyclohexane (HCH)	319857	—	—	0.014, [b]

Table 3: Organic Constituents Numeric Criteria

Organic Constituent[a] (*µg*/L)	CAS Number	Class C		Class D
		CCC 4-Day Avg	CMC 1-Hour Avg	30-Day Avg
gamma-Hexachlorocyclohexane (HCH) [Lindane]	58899	0.08	0.95	4.4
Hexachlorocyclopentadiene	77474	0.5	—	4
Isophorone	78591	1000	—	1,800, [b]
Manganese	7439965	—	—	100
Methoxychlor	72435	0.03	—	0.02
Mirex	2385855	0.001	—	—
Naphthalene	91203	600	—	—
Nitrobenzene	98953	1000	—	600
Nitrophenols	—	20	—	—
2-Methyl-4,6- Dinitrophenol	534521	—	—	30
2,4-Dinitrophenol	51285	—	—	300
Dinitrophenols	25550587	—	—	1,000
Nitrosamines	—	600	—	1.24, [b]
N-Nitrosodibutylamine	924163	—	—	0.22 [b]
N-Nitrosodiethylamine	55185	—	—	1.24, [b]
N-Nitrosodimethylamine	62759	—	—	3.0, [b]
N-Nitrosodi-n-Propylamine	621647	—	—	0.51, [b]
N-Nitrosodiphenylamine	86306	—	—	6.0, [b]
N-Nitrosopyrrolidine	930552	—	—	34, [b]
Nonylphenol	84852153	6.6	28	—
Organochlorides	—	—	—	—
4,4'-DDD	72548	0.001	1.1	0.00012, [b]
4,4'-DDE	72559	0.001	1.1	0.000018, [b]
4,4'-DDT	50293	0.001	1.1	0.000030, [b]
Organophosphates	—	—	—	—
Guthion	86500	0.01	—	—
Malathion	121755	0.1	—	—
Parathion	56382	0.013	0.065	—
Phenol	108952	—	—	300,000
Phthalate Esters	—	100	—	—
Bis(2-Ethylhexyl) Phthalate	117817	—	—	0.37, [b]
Butylbenzyl Phthalate	85687	—	—	0.10, [b]
Diethyl Phthalate	84662	—	—	600
Dimethyl Phthalate	131113	—	—	2,000
Di-n-Butyl Phthalate	84742	—	—	30

Table 3: Organic Constituents Numeric Criteria

Organic Constituent[a] (*μg*/L)	CAS Number	Class C		Class D
		CCC 4-Day Avg	CMC 1-Hour Avg	30-Day Avg
Polychlorinated Biphenyls (PCB)[d]	—	0.014	—	0.000064, [b]
Polynuclear aromatic hydrocarbons (PAH)	—	—	—	—
Acenaphthene	83329	50	—	90
Acenaphthylene	208968	—	—	—
Anthracene	120127	—	—	400
Benzidine	92875	250	—	0.011, [b]
Benzo(a)anthracene	56553	—	—	0.0013, [b]
Benzo(a)pyrene	50328	—	—	0.00013, [b]
Benzo(b)fluoranthene	205992	—	—	0.0013, [b]
Benzo(k)fluoranthene	207089	—	—	0.013, [b]
Chrysene	218019	—	—	0.13, [b]
Dibenzo(a,h)anthracene	53703	—	—	0.00013, [b]
Fluoranthene	206440	400	—	20
Fluorene	86737	—	—	70
Indeno(1,2,3-cd)pyrene	193395	—	—	0.0013, [b]
Pyrene	129000	—	—	30
Tetrachloroethylene	127184	800	—	29, [b]
Toluene	108883	600	—	520
Toxaphene	8001352	0.0002	0.73	0.00071, [b]
Tributyltin (TBT)	—	0.072	0.46	—
Trichloroethylene	79016	1000	—	7, [b]
Vinyl chloride	75014	—	—	1.6, [b]

Footnotes:

[a] For constituents with blank numeric criteria, EPA has not calculated criteria at this time. However, permit authorities will address these constituents in NPDES permit actions using the narrative criteria for toxics.

[b] The criteria are based on carcinogenicity of 10^{-6} risk level.

[c] The formulas for calculating the concentrations of substances indicated above are as follows:

[I] The numerical CCC for pentachlorophenol in μg/L shall be given by:

$$e^{(1.005(pH) - 5.134)}$$

[I.A] The numerical CMC for pentachlorophenol in μg/L shall be given by:

$$e^{(1.005(pH) - 4.869)}$$

[d] The polychlorinated biphenyls (PCB) criterion applies to total PCBs (*e.g.*, the sum of all congener, isomer, homolog, or Aroclor analyses.)

The proposed regulations are available for viewing at 1200 First St NE, 5fth Floor, Washington DC 20002. To pick up a copy of these proposed regulations at 1200 First Street NE, 5th Floor, Washington, DC 20002, call Rebecca Diehl at (202) 535-2648 and mention this Notice by name. All persons desiring to comment on the proposed regulations should file comments in writing not later than thirty (30) days after the publication of this notice in the *D.C. Register*.

Comments on the proposed rule should identify the commenter and be clearly marked "DOEE Water Quality Standards, Second Proposed Rule Comments." Comments may be (1) mailed or hand-delivered to DOEE, Water Quality Division, 1200 First Street NE, 5th Floor, Washington, DC 20002, Attention: DOEE Water Quality Standards, or (2) sent by e-mail to WQS@dc.gov, with the subject indicated as "DOEE Second Proposed WQS Comments."